Walker

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HOLD FAST

N°.

C. Leslie M.D.

FRASERBURGH.

Colloquia Chyrurgica:

Or, The Whole

Art of SURGERY

Epitomiz'd and made Easie, according to Modern Practice.

By Way of Dialogue.

WHEREIN

All Things necessary to be Known and Practis'd in the Cure of *Tumors*, *Ulcers*, *Wounds*, *Fractures*, and *Dislocations*, are concisely handled, practically and plainly apply'd; the Rules so short, that the whole may with ease be remember'd; and the Method so certain, that it may be always safely depended upon; whereby every one may be able, in a very short Time, to give an Account of his Profession, without reading a Multitude of Books.

To which is added,

A Compendium of ANATOMY,

Containing, in a very few Words, the Principal Matters relating to the Structure of MAN's BODY, and which are most necessary first to be learnt by every *Young Practitioner*, for whose Benefit the whole is made publick. The like (for *Brevity* and *Method*) not extant; and which may be of universal Use, as a Pocket-Companion, both by Sea and Land.

The *Third Edition*, Revised and Corrected, with many useful Additions, and a large Alphabetical *Index*, not in the former.

By *JAMES HANDLEY*, Surgeon, formerly of the ROYAL NAVY.

Quam quisq; novit Artem in eâ se exerceat.

LONDON, Printed for *A. Bettesworth*, at the *Red-Lyon* in *Pater-noster Row*. 1721.

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TO

Joſhua Lomax, *Eſq;*

One of the Repreſentatives in Parliament for the Borough of St. Albans, *in the County of* Hertford.

AS a grateful Acknowledgment for the many Marks of his Favour and Goodneſs, and from a due Eſteem of his Perſonal Merit, particularly his moſt extenſive Charity in aſſiſting *of*,

and distributing *to* the Poor and Needy, as well as his inviolable Attachment to his Majesty King *GEORGE*, and our happy Constitution, this third Edition of *Chirurgick Dialogues* is most humbly dedicated, By

His most obliged

humble Servant,

James Handley.

THE

THE

PREFACE.

THIS Manual having found such a kind Reception in the World, that it is now come to a third Edition, I have taken the Pains to Reviſe it, and not only (with Reaſon) altered, and left out, many Things, which were in the former Impreſſions; but have alſo made as many uſeful Additions as the Compaſs of the Volume would bear; which will make the Book much more Valuable and Uſeful, (tho' not more Expenſive and Dear) to my Young Brethren; for whoſe Benefit it was at firſt, and ſtill is, principally deſigned: And altho' it is not poſſible, that here *ſhould be* ALL *a Surgeon ought to know, yet here is* that, *which if*

he did not know, he could neither TALK *nor* ACT *like a* SURGEON; *and yet he may soon do* both, *if what is here laid down, be diligently attended to: And to make it yet more Useful, I have added an* Alphabetical Index *which will be of great use to the Reader, in finding any particular thing he wants to know of a sudden. To avoid the Imputation of Vanity, I did not put my Name to the former Editions, nor had I to* this, *but for the Importunity of the Bookseller, altho' this thing was no great Secret, long ago: Now whether my Name to the Book will be of any Service, in the Sale of it, Time must discover: But as I am not fond of seeing my Name in Print, especially to a* Juvenile Performance, (*as this was*) *so neither am I asham'd to do it, at this Time.* —— *And I flatter my self, that it will be of use, and in esteem, when* those mine Enemies (*that would not allow me that* little Honour *they thought there was in being the Author of it*) *are reduced to their Primitive Dust: And I hope, that as at first it made its own way thro' the World, it will*

now

now not only preserve its Old Friends, but procure many New ones, amongst the young Sons of Art, especially those of the Royal Navy, where I spent the best of my Days, and Vigour of my Youth: And I do pronounce it the best Service *a Young Surgeon can ingage in, (by happy Experience) if he would learn to be an Artist, live like a Gentleman, or be sure of a comfortable Provision for Old Age.*

And here I should conclude, but cannot, till I have a little exposed the Rascality *of a sworn Enemy to Surgery, and scandal to all* Science; *and that is, that* vile Animal *who loves to be dignified with the infamous Appellation of a* BONE-SETTER, *an empty ignorant thing, who, altho' in Vogue with the silly Country People all over the Nation, as if he was* SOMEBODY; *yet when weigh'd in the Balance, is not worthy to be rank'd with a* SOW-GELDER. *This Fellow, without either Learning, Education, Instruction, or any Qualification, but* Impudence, *sets up for* Bone-setting, *as if it came to him by* Inspiration, *and as if the Reduction*

of Fractures *and* Diſlocations *was not the Buſineſs of a* real Surgeon, *who is Educated in the Knowledge of the* Structure *of all the Parts of an Human Body,* (*and particularly of the Bones*;) *but was the peculiar Province of Ignorant Mechanicks, that know nothing at all of the Matter: And here lies their Roguery, that whenever a Patient receives a* Sprain *or* Contuſion, *and is in any Matter of Pain, and one of theſe* Bone-Jobbers *is called in, he certainly pronounces it either a* Fracture *or* Diſlocation; *which frighting the ignorant Patient, he ſuffers his Limbs to be extended till he* roars, (*as well he may, with the Force of Hands and Pullies, torturing him in that manner*) *then the Knave of a Bone-ſetter ſwears,* IT IS IN: *And the Patient is extreamly well pleaſed, to be thus tormented and cheated, whilſt the honeſt Surgeon, that perhaps had before ſeen it, and declared that there was neither Fracture nor Diſlocation,* (*as indeed there was not*) *is deſpiſed and vilified for a* Bungler: *Not only in Bone-ſetting, but in every other Branch of his Profeſſion:*

Whilſt

Whilst this worthless Knave comes off both with Applause and Money, for what he ought to be well lash'd at a Whipping-Post, if he had the just Reward of his Demerits. Now, no Bone being hurt, the Patient is abroad again about his Affairs, in a few Days; whereas if a Bone is really Fractured or Dislocated, every one knows, that knows any thing of the Nature of such Accidents, that such a thing is IMPOSSIBLE: But if a Surgeon tells the Populace so, they look upon him as a very silly Fellow, and not half so good a Workman as the Bone-Jobber, *whose sudden Cures,* they think, *bespeak his great Skill in reducing those Bones, which in Reality were never out of Place: So willing People are to believe their Bones are broke or dislocated, if they are in any great Pain; and* as willing *to believe they are reduced again, if one of these Vermine is so kind as to put them to* more Pain, *and privately to grate his Teeth the Moment he swears it is set: Which Noise of his Teeth they believe to be the Reduction of the Bones: But my Friend*

Fossill,

Foſſill, *whoſe Education ſhould teach him better Things, is likewiſe guilty of this vile Practice; and his greateſt Excellency ſeems to lie in reducing Diſlocated Hips; which he is ſo lucky to meet with, as frequently as other Surgeons do with Cut Fingers; and he as eaſily reduces them as another would crack a Nut.* Riſum teneatis! —— *But when Men have loſt their retentive Faculty, at* both Ends; *it is no wonder if they are* looſe *in other things, and more* outragiouſly *wiſe than other Folks, having* travell'd much at Home, *and ſtudy'd hard in Brandy-Shops and Taverns, for many Years, with great Applauſe of the* Mobility: *But enough of this at preſent, having no hopes to reclaim an incorrigible Profligate, that thinks nothing a Crime; for as Mercury will hardly operate upon ſome Conſtitutions; or if it does, it ſends the Humours toward the* BREECHES, *inſtead of the* ſalival Glands; *ſo ſome ſort of Sinners, are never to be Converted, but by* Hemp *and*

a Triangle; *where I shall leave* Fossill *to his Contemplations, and a Farewel* Psalm: *And shall conclude by relating one merry and true Story, of one of these Operators in Bones. A deservedly Eminent Surgeon of this Country, who lives some Miles from me, and is very understanding in his Art,* Mr. R—— *of* W———n, *by Name: Having been shamefully traduced, aspersed, and vilified, by one of these sort of* Bone-Jobbers, *one* P. *whose Family is very famous for these sort of Operations, contrived this Method to be even with him;* (viz.) *He hired a lusty, sharp Country-Fellow to go to the Bone-setter, with his Arm in a Sling, and pretend extream Pain in that Shoulder: Being come to him, he made dismal Faces, and told as dismal a Story, and could not bear to have his Elbow brought to his Body, without roaring out most horribly:* P. *shook his Head, stript off his Cloaths, handled his Shoulder, and pronounced it Dislocated. The Fellow had much ado to keep his Counte-*

nance,

nance, to see the Ignorance and Impudence of the Bone-setter: But he soon chang'd his Note; for he was forced to have his Arm extended to that violent Degree of Pain, that he was under a great Temptation to discover the Trick, to get clear of the Bone-setter: But, as it happened, he held out; and the Bone-setter could not set his Shoulder, (as it would have been very strange if he had, when it never was out of Place) and directed the Fellow to meet him again some Days after, when he would come prepared with a fit Instrument to reduce it. The Man humour'd it very well; but told him he was a Poor Man, and being sent to him by the Officers of the Parish, (who must pay for the Cure) he pray'd P—r *to give him a Letter to them, and state the Case fairly to them; which Mr.* Wiseacre *very readily did, and made a most dismal Business of it, (which Letter I have seen) and therein set forth, That the Head of the Shoulder-bone was slip'd* a long way under the Arm; *That it was*

an

an uncommon Case, and not One in Ten understood it: But if they would send the Fellow such a Day, *he doubted not but, by the Blessing of God, to reduce it, (so familiar and common do these Wretches make the Name of God, to cover their Knavery!) and as to the Price, he would not be out of the way,* &c.

The Countryman having got the Letter, (which was the Principal thing he came for) carried it directly to Mr. R--me, *who shewed it to the Officers of the Parish, and all round the Country, to the great Mortification of poor* P——r, *who was forced to knock under, ask Mr.* R's *Pardon, and promise never to make bold with his Character any more. I could tell several Instances of the Ignorance and Impudence of these Fellows, of my own Knowledge; and several more from my Neighbouring Brethren, Men of Veracity; but I have not Room here, and shall reserve it for another Opportunity.*

Ja. Handley.

A

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Collo-

Colloquia Chyrurgica:

OR THE

Whole Art of SURGERY Epitomiz'd and made Easy.

CHAP. I.

Of Tumors *in general.*

Q. *What is Surgery?*

A. Surgery, or *Chirurgery*, by its *Etymology*, τῆς χειρὸς ἔργον, signifies *Manual Operation*; and by the learned in that Art, is defined to be, *The third Branch of the Curative Part of Medicine, which teacheth how sundry Diseases of the Body of Man are to be cured by Manual Operation.*

Q. *How ought a Surgeon to be qualified?*

A. He ought to have a reasonable Experience in all Parts of his Art; to have a competent Stock of Learning; to have an unshaken Courage, a steady Hand, a clear Sight, to be able to give a rational Account of what he does, and to be an *honest Man.*

Q. *What is a* Tumor?

A. It is a Diſeaſe, for the moſt part, incident to the *Organical Parts*, increaſing their Quantity above Nature, by reaſon of receiving ſuperfluous Humours, ſent from other Parts.

Q. *How are thoſe Humours received?*

A. By *Affluxion* or *Congeſtion.*

Q. *What is* Affluxion?

A. It is when an *Humour* offending, either in *Quantity* or *Quality*, ſuddenly and with Violence, ſeizeth upon any Member, either by reaſon of its Weakneſs, Rarity, Looſeneſs, Dependency, Heat, or Pain, or becauſe the whole Body is full, and the Parts ſending, Strong.

Q. *What is Congeſtion?*

A. That is when an Humour is collected in any Part, by little and little, by reaſon of the Weakneſs of the concocting and expelling Faculty of the ſame.

Q. *What do you mean by an* Organical Part?

A. Chiefly a *Muſcle*; in which are a Membrane, Fleſh, Tendon, *&c.* Alſo a *Nerve*, which conveys the animal Spirits, and diſtributes them; and the *Arteries*, which do the ſame by the Blood.

Q. *What are the Denominations of a* Tumor?

A. In Greek it is called ὄγκος; that is, a Protuberance in the Body: The *Arabians* and their barbarous Followers call all Tumors *Apoſtemata*; in Latin *Abſceſſus.* All Tumors, wherein is a Collection of Matter, we call *Apoſtems.* The Word *Tumor* is a Latin Word, and is derived from the Word *Tumeo*, to be raiſed or puffed up.

Q. *What are the Cauſes of* Tumors?

A. Surgeons reckon up eight *External Cauſes*, (*viz.*) 1. A contagious Air in time of the Plague. 2. Things exceeding Temperature in the active Qualities; as, *Veſiccatories*, ſitting long on a cold Stone,

Stone, *&c.* 3. When too hard Ligature is made upon a Part. 4. The Application of Cupping-glaſſes. 5. A Wound, Fracture, Luxation and Contuſion. 6. Biting of any Beaſt. 7. By taking Things inwardly offenſive to Nature. 8. Immoderate Motion, whereby immoderate Heat is produced, and the Humours become more ſubtil.

Q. *What are the* Internal Cauſes?

A. Either *Humours* or *Flatuoſities.*

Q. *What are the* Humours?

A. Either Natural or Unnatural, and they again either *Sincere* or *Mingled.*

Q. *Which are thoſe you call* Sincere?

A. Choler, Phlegm, and Melancholly.

Q. *Which do you call* Mingled?

A. When one of the former is mingled with the Blood; (for Blood is no where *Sincere*, but according to the Humour mingled with it, which is predominant) it is called Cholerick, Phlegmatick, Melancholly Blood.

Q. *What are the* Unnatural *Humours*?

A. Water; as in the Dropſie, *&c.*

Q. *What other Diſtinctions have you?*

A. Simple and *Compound.*

Q. *What do you call a* Simple *Tumor?*

A. If it proceed from Blood, (tho' it be never unmixed) it is called *Phlegmone*, or *Inflammatio*; if from Choler, *Eriſipelas* and *Herpes*: All which are hot Tumors. Of Phlegm, is an *Oedema*; of a Melancholly Juice, is a *Schirrus*: And theſe two are cold Tumors. If from *Atrabilis*, Cancer; if from Water, it is called *Tumor Aquoſus*; and particularly from hence come *Hernia Aquoſa*, *Hydrops*, *Hydrocephalus*, &c. If from Flatuoſity, it is called *Emphyſema*: And theſe are cauſed by the defect of the natural Heat.

Q. *What do you call* Compound *Tumors?*

A. When there is a Combination of these, they beget a Compound *Tumor*, and what Humour most predominates, carries away the Name; as *Phlegmonodes*, *Erisipelatodes*; and so of the rest.

CHAP. II.

Of the general Indications of Cure in Tumors.

Q. *What is an* Indication?

A. It is that which sheweth what Course is to be taken for the *Recovery of Health.*

Q. *From whence are the general Indications taken?*

A. Either from the Matter, or Times of every *Tumor.*

Q. *As how?*

A. In the Matter, we are to observe the Motion of it, and its Nature; as concerning its Motion, it is either in flowing, or is already received into the Part.

Q. *What are the Causes of Fluxion?*

A. Two; (*viz.*) *Plethora*, or Fulness; and *Cacochimia*, or an ill Habit. *Plethora* is of two sorts, *ad vasa*, and *ad vires.*

Q. *What do you understand by that?*

A. Ad vasa, is when the Veins are only full, and the Body nevertheless quick and nimble: And that it is again (1) pure, when there is a due Proportion of the Humours of the Body; and (2) impure, when there is an Excess of any of the three Humours, besides Blood; as Phlegm, Choler, and Melancholy. *Ad vires*, is when there is such a Fulness as causeth a Lassitude of the whole Body.

Q. *What must be done in this Case?*

A. Ple-

A. Plethora, requires *Plebotomy*; and *Cacochimia*, Purging: Both which are to be done according to the Strength of the Patient.

Q. *How do you discern Strength and Weakness?*

A. By the Functions, thus: The Weakness of the *Natural Faculty* is discerned by Crudity of Urine, and Excrements of the Body; the Weakness of the *Vital Faculty*, by a weak Pulse, and by breathing, weak, and sick; and the Weakness of the *Animal Faculty*, is found out by defect in moving, and feeling.

Q. *What are the Ends of* Plebotomy *?*

A. Derivation, and *Revultion.*

Q. *What are they?*

A. Derivation, is a drawing of the Humor to the Part adjacent, or of the same side, by opening a Vein, or a Branch of it, which is inserted into the Part affected. *Revultion*, is a drawing of the Humor to the opposite Part, as from the Head to the Feet, from the right Side to the left, *&c.*

Q. *What more will you do, to prevent, or abate* Fluxion *?*

A. Since a hot Distemperature is most commonly the Cause, we must apply Things cooling; as Cloths moistened in *Ol. Rosar.* or *Violar.* laid on cold, and renew them as they grow hot; or apply *Unguent. Rosat. de Ceruss*a, *Populean*,&c. between two Cloths.

Q. *Why between two Cloths?*

A. It thereby keeps the *Unguent* from drying, and doth not hinder the perspirating of Vapours, which it otherwise would do, and thereby increase both Pain and Heat. The same we are to do also when we apply *Cataplasms* to this purpose.

Q, *But what if the Ways by which the* Tumor *passeth be too large, and a hot Distemperature joyned, how will you proceed then?*

A. Then Things aſtringent and cooling are to be applied, Rollers and Cloths being moiſtened in them: As, *Bacc. Mirtil. Fol. Roſ. Rub. Sicc. Cort. Granat. Baulauſt. Sumach. Cort. Querci,* &c. *Coq; in Vin. Rub. vel aceto, & Aq; Font.* And the Parts by which the Humors paſs, are to be rolled pretty ſtraight with Rollers dipped in the ſame.

Q. *But ſuppoſe the* Tumor *be painful.*

A. Then I uſe *Anodines* or *Narcoticks.*

Q. *What are* Anodines?

A. They gently *Contemperate* the Part, by reaſon of the Conformity which they have to the Nature of Man; are hot in the firſt Degree, and are of ſubtil Parts: As, *Lac. ol. olivar. vet. auxing. porcin. adeps humani, anſeris, gallin. Urſi, ol. Cham. lillior. lumbricor. lini, amigd. dulc. ovor. ol. Roſar. pul. Croci,* &c. Or make this *Cataplaſm,* ℞ *Fol. viſci pomorum cum fructibus ana,* Mj. *Fol. Hyoſciani* Mij. *Fol. papaveris* Mj. *ſub cineribus coquantur, addendo tandem Mic. panis in lacte tepido Macerati, Aſſ. vitell. ovar.* No. ij. *pulv. Croci.* ℥j. *ol Cham. & Roſar. ana q. ſ. fiat Cataplaſm.* S. A.

Q. *What are* Narcoticks?

A. They deprive the Part of the *Faculty of Feeling*: And ſuch are, *Opium, Hemlock, Night-ſhade,* &c. Theſe are to be uſed when the former will not prevail. Sometimes they are uſed alone, and ſometimes with Things hot, if we fear Stupifaction of the Part unto which they are to be applied.

Q. *Suppoſe the* Tumor *proceeds from the Bite or Sting of a venemous Beaſt?*

A. (1.) Then the Part is to be immediately ſcarrified, and Cupping-glaſſes to be applied; and then the Part is to be fomented, *cum aceto & ther. ven.* and a Cataplaſm, *ex ther. ven.* applied over all. The Member is to be bound hard two

or

or three Inches above the Bite or Sting; and *ther. ven. cum Sal. viperar.* to be given inwardly three times a Day.

Q. *What do you underſtand by the Times of a* Tumor?

A. I underſtand the *Beginning*, the *Increaſe*, the *State*, and the *Declination.*

Q. *What do you call the Beginning of a* Tumor?

A. The Beginning I take to be, when a Part begins to tumify.

Q. *What Medicines are then moſt proper.?*

A. Repelling Medicines, which are cold, and of a groſs Subſtance, to thicken the Part affected, and to cool the inner Parts of it: And ſuch are, *Alb. ovor. plantag. ſemper viv. ſolan. petroſelin, fol. roſ. Rub. Bacc. Mirtill, Cort. granat. galliæ, ſang. Drac. Ter. ſigillat. acet.* &c.

Q. *Are you to uſe Repelling Medicines in all Caſes?*

A. No: As, (1.) If the Matter be venemous or malignant, leſt being repell'd it aſſault ſome principal Part. (2.) If the Matter be critically turn'd to a Part. (3.) If a *Plethora* abounds. (4.) When the Humour floweth to the Emunctories. (5.) If the Part have but little natural Heat, leſt it mortifie. (6.) If the Pain be very great; for then only *Anodines* are to be uſed.

Q. *What do you call the* Increaſe *of a Tumor?*

A. When the Part is ſtretched, and Symptoms increaſed.

Q. *What is Diſcuſſion?*

A. It is an Evacuation of a thin Matter, (gathered in a Part) by inſenſible Perſpiration, procured by the natural Heat, increaſed by proportionate Medicines, &c.

Q. *What do diſcuſſive Medicines effect?*

A. They help natural Heat : Which being done. (1.) The Humor is made thin. (2.) It is resolved into Vapour. (3.) It is drawn from *the Center* to the *Circumference.* (4.) It is expell'd by the Pores of the Skin : Wherefore they must be familiar to Nature, aud such as perform their Office by consuming superfluous Humidity, and must be hot and dry.

Q. *How many Degrees of discussive Medicines are there ?*

A. Three : (*viz.*) (1.) Those that are hot and dry in the second Degree : As, *Fic. Cham. Galb. Rad. Lillior. Melliot. adeps anseris, Altheæ,* &c. and because such ease Pain, we should ever begin with them. (2.) Those that are something more hot and dry : As, *Calamint. puleg. Hyssop. Menth. Sem. Cymin. Anethi. farin. fabar. & fœnugrec. adeps Ursi & Can. vet.* &c. (3.) Those that dry in the third Degree ; as Nitre, unslaked Lime, *Sulph. viv.* &c. If the Tumor is hard, forbear *Repellents*, and use *Discutients* and *Emollients* ℞ *Rad. & Fol. Altheæ, ana Mj. Sem. leni & fœnugrec. ana* ℥vj. *pulv. flor Cham.& Milliot. ana* ℥ij. *far. Hord & Tritici ana* ℥vj. *fiat Cataplasm, addendo Mel. Com.* ℥ij. *ol. Sambua & Auxung anseris ana* ℥j.

Q. *What do you call* the State of a *Tumor ?*

A. When it is come to such a Degree as it can grow no bigger.

Q. *How do you know when that is ?*

A. All Symptoms are at their height, when neither increasing, nor decreasing.

Q. *What will you do then ?*

A. Use Anodines with Discusients, by reason of Pain.

Q. *How will you know when the Tumor* declines ?

A. When the Symptoms begin to abate.

Q. *What must be done then.*

A.

A. I must then use *strong Discussives*, as before spoken of ; or in case of Necessity, *Diach. cum. gum. Diach. Ireat*, &c.

Q. *How do Tumors end ?*

A. By Resolution, Maturation, Induration, and Corruption ; and as Discussion is better than Suppuration, so Induration is better than the Corruption of the part.

CHAP. III.

Of Curing Tumors *in general, come to Suppuration.*

Q. *Suppose you cannot discuss a Tumor, What will you do then ?*

A. Bring it to Suppuration, or Maturation, vulgarly call'd *Apostemation*, and that is when the impacted Blood, or Humor, is converted into *laudable Matter.*

Q. *How is this done.*

A. By outward Applications laid on warm, which working upon the superfluous Humidity, causeth Putrefaction.

Q. *But suppose it attended with Pain, would you not use Narcoticks.*

A. No, for they extinguish the *Natural Heat of the Part*, which is the Principal Cause of *Coction* ; they also thicken the Matter, and make it more rebellious ; but instead of them I use *Anodines*, which we spoke to before.

Q. *But what if Hardness possess the Part ?*

A. Then I use *Emollients.*

Q. *What are they ?*

A. All Fats: *Omn. ſpec. Malv. tuſſilag, ſem. Cydinitor. lill. alb. ſem. lini, fic. Uvar. paſſ. Medul. Omn. ammoniacum Bedellium*, &c. of which Cataplaſms may be framed.

Q. *But if immoderate Heat trouble the Part, what muſt be done?*

A. I muſt uſe things Cooling in the ſecond Degree; as, *Umbilic. veneris ſemper viv. lill. aquatic. plantag. farin. Hord*, &c.

Q. *But when theſe Accidents are remov'd, what then?*

A. Then I proceed to aſſiſt Nature, *by increaſing Natural Heat*, by ſuppurating Medicines which ought to be ſuch as moderately ſtop the Pores, only ſuffering the ſharp Vapours to breathe out, and to detain thoſe which are mild and thick.

Q. *What ſuppurative Medicines do you uſe?*

A. Of ſuppurative Medicines there are two Ranks; of the firſt, is *Adeps humani, anſeris, gallin. Butyr. ol. ollivar. fic. ſem. lini & fenugrec. Malv. farin. tritici. rad. fill. alb.* &c. Of the ſecond ſort are *Gum. Galban. ammoniac. Elemi pix Burgund. & Naval. Croci, Cæpæ. toſt. ol. Cham. adeps Can. & Urſi Empl. Emucilaginibus, Diach. cum gumm*, &c. of which Suppuratives may be framed at Pleaſure: Or (for Example) ℞ *Rad. Lillior. alb.* ℥iij. *cepar. coct. ſub. cineribus* ℥ij. *ſummitt. altheæ Mij. fic. ping. toſt.* No. vi. *coq. & contus adde far. tritici.* ℥ij. *pulv. ſem. lini* ℥j. *auxung. par in* ℥ij. *ol. Lillior. q. ſ. cum vitel ovor.* No. ij. *Croci.* ℈ſs. *fiat Cataplaſm.*

Q. *How do you know when a Tumor is come to full Maturation?*

A. (1.) The Tumour by contracting it ſelf, ſeems leſs than it was in the State. (2.) It draws it ſelf to a Point. (3.) Hardneſs and Tenſion are much abated. (4.) By preſſing with the Finger, we may feel the Matter fluctuate. (5.) The Patient

tient feels much Eaſe. (6.) The Heat ceaſeth. (7.) The inflamed Part (eſpecially at the Point) will become white. (8.) The *Cuticula* will be ſhrivell'd.

Q. *Why ſhould Contraction be a Sign of Suppuration?*

A. Becauſe whilſt Natural Heat concocts the Matter, Vapours are raiſed by the Heat, and ſo the Part is diſtended, but when the Matter is concocted, the Elevation of Vapours ceaſe, and the Tumor a little falls.

Q. *Why ſhould drawing to a Point be a Sign?*

A. Becauſe when Nature overcomes the Matter, it draws it together to the Skin, and having conquer'd her Enemy, expells him.

Q. *Why ſhould the Abatement of* Hardneſs *and* Tenſion *be a Sign?*

A. Becauſe Suppuration being procured, many Vapors are diſcuſſed, which before ſtretched the Skin, and made it hard.

Q. *Why ſhould the Patient's Eaſe be a Sign?*

A. Becauſe the ſharp Vapors are reſolved, and the Matter being well concocted, make the Parts more looſe.

Q. *How will you open an Apoſtem come to full Maturation?*

A. Two ways. (1.) By *Inciſion.* (2.) By the *potential Cautery.*

Q. *Which do you eſteem the beſt?*

A. The Potential Cautery gives the moſt large and certain Diſcharge; but in Apoſtem of the Face, they are to be ſhun'd, becauſe of the Scars they leave behind them, but in other Places I uſe them, in large Tumors, or to gratifie timerous Patients, who will not admit of Inciſion.

Q. *What is the Potential Cautery compos'd of?*

A. Soap-lees and unſlacked Lime, boyl'd to the Conſiſtence of an Unguent; or black Soap and unſlacked Lime mixed. Of a ſtronger ſort, and which muſt be uſed with great Caution, are *Lapis infernalis*, (mixed one third, fourth or fifth part with Black-Soap, and laid on) and the Silver Cauſtick, *&c.* But either of theſe being uſed in the form of an Unguent, muſt be ſpread upon a Pledget of Lint, and laid upon the moſt ſoft and depending part of the Tumor, with a Plaiſter of Diapalma (or ſome ſuch) all round it, to keep it from ſpreading, which it will do, leſs or more, tho' we do all we can to prevent it, therefore the Pledget muſt be made but ſmall.

Q. *How long is the Cauſtick to lie on?*

A. I allow for the common milder ſort twelve Hours; for the ſtrong, not ſo much. If you apply the Silver Cauſtick, hold one end of it between your Fingers, covered with a Rag; and having juſt wet the other end, apply it to the part, holding it on cloſe, now and then wetting it a freſh, and in a little time you will have an Eſchar. By doing this on a particular Occaſion to a ſound Part, and managing it thus for three Hours: I have made an Eſchar without Pain, which, when it has been divided, digeſted, and ſeparated, has left a Cavity big enough to turn the End of ones Thumb in, and an Inch deep. I only hint this, to ſhew what may be done, with prudent management.

Q. *What are you to conſider when you come to open an Apoſtem?*

A. I am to be careful to ſhun *Veins*, *Arteries*, *Nerves*, and *Tendons*; if the Skin is only to be divided, the Inciſion is to be made *ſtrait*; but a Muſcle is to be cut according to its *Fibres*; and it muſt be opened in a depending Part, becauſe of

of giving a free Diſcharge to the Matter, which would otherwiſe be kept in, and inſinuate it ſelf deeper. It muſt alſo be divided where the Part is thinneſt, to avoid Pain; the Apertion muſt be proportionate to the Tumor, and the Diſcharge according to Reaſon; not too much at once, for fear of weakening the Patient too much.

Q. *What Accidents follow the opening an Apoſtem?*

A. Fainting, Pain, and a Flux of Blood.

Q. *How are theſe to be remedied?*

A. In caſe of Faintings, give Cordials or Wine; if Pain, imbrocate with *ol. Roſar.* &c. and as for the Flux of Blood, it is to be ſtopped with *Bol. ſang. Drac. alb. ovor. acet*, &c. mixed and applied on Tents and Pledgets, with good Boulſters and Bandage over all, *&c.* and ſo let it remain 24 Hours.

Q. *How will you dreſs it after opening, if there is no Flux of Blood?*

A. If I find that the Potential Cautery has done its Buſineſs, by making an Eſchar, I take off the Cauſtick, waſh out the Salts with warm Milk or Water, divide the Eſchar, and dreſs it with warm Baſilicon, or ſome other Digeſtive, till it falls off.

Q. *What muſt be done then?*

A. Dreſs it with Baſilicon alone, or mixed with *Merc. percepit. Rub.* or dipt in *Spir. vin* and ſometimes if there is much Putrefaction, inject *Spir. vin per ſe*, or mixed *cum mel Roſar.* as I ſee Occaſion; and if it be very hollow round about, be ſure to dilate it by Inciſion, or cut off the Lips, if they grow Callous, *&c.* After it is well digeſted, I Mundifie, Incarne, and Siccatrize.

Q. *How do you know when it is well digeſted?*

A. When the Matter is *thick, white, ſweet, even*, and leſs than it was, and the Part looks clean.

Q. *How will you* Mundify, *or* Deterge?

A. Many

A. Many Surgeons have many Methods; the moſt common Way is with *Ung. Apoſtolor Ung. Baſilic. & precipit. rub.* or *tereb. ven. mel Roſar. Sarcocol. Mirrh. Rad. Ariſtol. Rot. Mundificativ. paracels, ex apio*, &c.

Q. With what will you Incarn?

A. With *Liniment. Arcei, Gum Elemi*, &c. and ſometimes I uſe Digeſtives and Incarnatives together, as the Occaſion requires.

Q. How do you know when it is fit to Incarn?

A. When the Part is *very clean*, and has *little red granulated Spots* appearing in it, and a ſmall diſcharge of Matter from it.

Q. When is the time to Cicatrize?

A. When the Ulcer is *almoſt incarned* even with the *Cutis*; not ſooner, leſt it ſhould heal with a *Cavity*; nor later, leſt a *deformed Scar* is produced.

Q. With what will you Cicatrize?

A. With *Unguent. Deſicc. Rub. Aq. Calcis*, or *dry Lint*, prepar'd out of fine Cloth, dipt in a Diſſolution of *Vit. Rom.* in Water, and dried, or *Liniment. Arcei*, waſhed in *Aq; Calcis*, &c.

Q. What if a Fungus, Hyperſarcoſis, *or ſpongy proud Fleſh ariſes?*

A. I take it off with *Merc. precipit. Rub. Allum. uſt.* and ſometimes by the Knife, *&c.*

CHAP.

CHAP. IV.

Of a Phlegmon, *shewing the general Method of its Cure.*

Q. *WHat is a* Phlegmon?

A. It is a hot *Tumor*, proceeding from the *Affluxion* of Blood to any Part.

Q. *From whence is the Name derived?*

A. φλεγμονὴ is derived from φλέγω from whence *flagro*, to burn, by reason of its heat.

Q. *What is the true Cause of a* Phlegmon?

A. It is caused by *good Blood* offending in quantity.

Q. *What are the* true Signs *of it?*

A. It suddenly begins, and speedily increaseth, it is very hot, of a fresh Colour, is attended with great Pain, Pulsation, Tension, and the Veins are often very apparent, black, or ruddy.

Q. *What are its Differences?*

A. If it sieze upon the *Meninges* of the Brain, it is called *Phrenitis*; if on the *Conjunctiva* of the Eye, *Ophthalmia*; if on the Muscles of the Throat, *Angina*, or *Quinzy*; if on the *Pleura*, *Pleuritis*, or Pleurisie; if on the Lungs, *Peripneumonia*; if on the Emunctory of the Heart and Liver, *Bubo*; if under the Ear, *Parotis*; otherwise it carries the general Name of *Phlegmon.*

Q. *What are (in short) the Means of Cure?*

A. They are two: (*viz.*) *A fit Diet*, and *proper Applications.* In the beginning I order a thin and cooling Diet, and only what is sufficient to support Nature; as, *Chicken* or *Veal-broth*, *Water-gruel*,

gruel, cooling Salads, Barly-broth, Spinage, Sorrel, Purſlain, &c. His Drink, *Small-Beer, Barly-water* made palatable with *Syr. Violar.* or *Syr. Sacchari,* and ſuch like: He muſt forbear *Wine, Eggs, Fleſh, Spices, Stale-Beer* and *Ale,* &c.

Q. *Suppoſe the Humour flows immoderately, how will you abate it?*

A. By *Phlebotomy* and *Purgation.*

Q. *What are you to conſider in* Phlebotomy?

A. The Seaſon of the Year, and Age and Strength of the Patient.

Q. *Why is Purgation of uſe here, ſince no Blood (which is the Matter of* Phlegmon) *can be ſpent that way?*

A. Catharticks or *Purgatives,* dry the Body and deprive the Blood of Moiſture, and makes it *more unapt to flow,* and by purging out ſharp Humours, which *Irritate* the Part affected, the Enemy is conquered with more Eaſe.

Q. *What* Catharticks *do you uſe in this Caſe?*

A. Lenitives, as *Caſſia, Tamarind. Elect. Linitiv.* &c.

Q. *What elſe is to be done?*

A. Diſcuſſives, (of which I gave an Account before) Defenſatives and Repellers.

Q. *What do you call Defenſatives?*

A. Theſe are ſuch as by their *aſtringent Nature, purſe in,* and contract the Veſſels, thereby hindering the Humour from flowing to the Part, and are in Nature cold and dry.

Q. *Where muſt they be applied?*

A. To the Parts contiguous, to the Joynts and Parts above them.

Q. *Why ſo?*

A. Becauſe there the Veſſels are more plain and conſpicuous, and ſo apt to receive Impreſſion from the Medicine.

Q. *What*

Q. *What are your defensive Medicaments?*

A. The more mild are, *succ. plantag. Ros alb. nigell. papav. Rhead. aq; sperm Rhanar. vin. rub. acet Oxileum,* &c. Cloths being dipped in them, and applied, and often renewed; or the common Defensative of *Diapalma* and *Bole*, spread upon Cloth or Leather.

Q. *What is Oxileum?*

A. Acetum & ol. olivar. commixt. The more strong Defensives are, *Bol. ver. sang. Draconis, ter. sigillat, ol. Mirtillor. Mastic. albumin. ovor.* &c.

Q. *What are Repellers?*

A. Such Medicines as drive back the Humour from the Part.

Q. *What are they?*

A. Some are mild, being cold and moist, as *Lactuc. Siccoria portulac. alb. ovor. nigel.* &c. And some are more strongly cooling, as *Cicut. Mandragog.* &c. Again, some are more astringent, cooling and drying, and repel more strongly than the others. Of these some are weak, as *fol. Plantag. fol. Ros Rub.* &c. And others are more strong, as *Bol Cort. granat. vin Rub. allum. galliæ,* &c. All which may be made into Cataplasms, with *far. Hord.* &c. Or thus, ℞ *far. Hord.* ℥vj *pulv. cort. granat.* ℥ij *pulv. balaust.* ℥ss *Sua. sedi Major.* ℥iij *vin. rub q. s. coc. ad consist. Cataplasma, & in fine Coctionis adde ol. Mirt.* ℥ij.

Q. *When are these to be applied?*

A In the beginning of the *Tumor*, and so long as I see any good Effect from them.

Q. *What Mischief comes of their untimely Application?*

A. They wrinkle the Skin, increase the Pain, harden the Humour in the Part, and often return it to some *Noble* and *Principal Part.*

Q. *How do you know when Repellers are to be applied?*

A. They are to be applied if the Patient comes whilſt the Blood is yet in the ſmall Veins; becauſe then the Humour is but little and thin; Nature is ſtrong, and the Matter is not yet ſettled: And, as I ſee occaſion, I ſometimes apply *Repellers* and *Diſcuſſives* together.

Q. *In what Caſes are repelling Medicines* not *to be uſed?*

A. (1.) If the Part be weak, leaſt its natural Heat be extinguiſhed. (2) When there is great Pain; becauſe they would cauſe greater. (3) When the Fluxion is violent; for then they would be fruitleſs.

Q. *Tell me (in ſhort) how you would manage it, from firſt to laſt?*

A. In the Increaſe of a *Phlegmon*, I uſe repelling Medicines, and ſometimes with diſcuſſing; becauſe until the latter end of the Increaſe, there is hopes that the Matter may be repell'd; but when the Blood is once ſlipt out of the Veins, and the *Phlegmon* begins to abate, I immediately fly to Diſcuſſives, which make the Blood thin and apt to flow, convert it into Vapors, and evacuate it by the Pores of the Skin: And if, notwithſtanding all this, there be tenſion or ſwelling, then I endeavour to procure Suppuration.

Q. *How is Matter produced?*

A. By a *natural* and *unnatural* Heat encountering together.

Q. *Why is it termed Good, if it be White?*

A. Becauſe that ſhews it to be produced of natural Heat, and is cauſed to be white by the Coats of the Veins, Arteries, Nerves and Membranes, which are in Colour white, and turns the Matter into the ſame Colour.

CHAP.

CHAP. V.

Of an Eryſipelas.

Q. *WHat is an* Eryſipelas?

A. It is a hot *Tumor*, proceeding from Choler, of a bright Red Colour, tending to Yellow, without Pulſation or circumſcribed Tumor.

Q. *Is Choler always Yellow?*

A. For the moſt part, and in a healthful State, it is; but in a *Morbus State* it is often of ſeveral other Colours, as Pale, Black, *Eruginous*, Rediſh, *Vitelline*, &c.

Q. *Why do you call this* Tumor ἐρυσιπέλας?

A. From ἔρυσον (which the Ancients uſed to ſignifie *Red*) and πέλας, ſignifying *near*. So that *it is a* Tumor *in Colour coming near to Red.*

Q. *What are the Signs of it?*

A. Great Pain, and Heat; the Colour of it of a bright Red, tending to Yellow; it is ſmall, poſſeſſing only the Skin; and is attended with a Feaver.

Q. *What is the Difference between a* Phlegmon *and a* Eryſipelas?

A. A *Phlegmon* poſſeſſeth the Skin and Fleſh under it; an *Eryſipelas* only the Skin; a *Phlegmon* is of a dark Red Colour, by reaſon of thick Blood lying deep; but an *Eryſipelas* is of a bright Red, tending to Yellow; a *Phlegmon* ſettleth it ſelf in one Part, but an *Eryſipelas* makes Red the adjacent Parts by ſpreading; a *Phlegmon* comes of Blood, an *Eryſipelas* of Choler, in which the Heat and *ſymptomatick Feaver* is greater than in a *Phlegmon* alſo.

Q. *What Prognoſticks are you able to make?*

A. That which proceeds from natural Yellow Choler is mildeſt; if it be driven to the outward Parts, it is a good Sign; ſo it is bad (on the contrary) if it return from the outward Parts inward; it is more dangerous in the Head than in other Parts: If it appear in Wounds, Fractures, Ulcers, *&c.* it is very often mortal, if it does not proceed from Application of too hot Medicines. If it tends to Suppuration, or if a Bone be bare, and the adjacent fleſhy Parts be poſſeſt with it, it is an ill Sign.

Q. *How is a Patient to be relieved that labours under it?*

A. By Diet, Surgery, internal Medicines, and external Applications.

Q. *How is he to be dieted?*

A. It muſt be Cooling and Moiſtening; Chicken-broths with cooling Herbs, Oat-meal-gruel, *Ponado*, Spinage, Sorrel, Lettice, *&c.* His Drink, *Aq; Hordei*, Spring-water, or Small-Beer. The Seaſon of the Year muſt be conſider'd, Sleep procur'd, and all Diſturbances of Mind ſhunn'd, *&c.*

Q. *Is* Phlebotomy *to be uſed?*

A. *It is diſputable*: Yet in an *Eryſipelas Phlegmonodes*, wherein Blood increaſeth the Heat, in what Part of the Body ſoever it be, a Vein is to breathed, without doubt; as alſo if it invade the Head, Neck or Face, leſt a *Phrenitis* or *Angina* follow: But in all other Places they tell us not; becauſe by *Phlebotomy* the Blood which remains, moves more quick, and becomes more ſubtil, that which is the qualifier of Choler is taken away, and the Patient weakned.

Q. *What are your internal Medicines in an* Eryſipelas *?*

A. I give Lenitives, as *Caſſia, Elect. lenitiv. Diacatholic. Elect. E ſucco Roſar. tamarind crem. tart. Manna*, &c. And if the Inflammation be mild, Gliſters made of the Decoction of cooling Herbs, with the aforeſaid Electuaries, may ſerve.

Q. *What are you external Applications?*

A. In theſe I muſt be cautious, not to apply aſtringent Medicines, which are cooling and drying, becauſe the Vapors in this *Tumor* are ſharp, and if they ſhould be pent in, they might *erode* and corrupt the Part: The Medicines then muſt be *Cold* and *Moiſt*, but not *Narcotick*, unleſs the Pain be extream, and the Grief far from any principal Part, and *unctuous Medicines* ſtop the Pores: But I uſe Cloths dipped in *Aq; vel ſucc. Umbell. veneris, Equiſet. plantag. Lactuc. petroſelin. papav.* &c. mixed with *acetum.* Alſo *Cerat. infrig. Galeni, ſapi Caſtil. diſſolv. in aq; Fontan. aq; Sperm. Ranar. cum aceto, ex vin. Rub.* wherein ſome *Myrrh* has been diſſolved. Alſo foment the Part with *Decoct. ſalviæ cum ſapone caſtil.* and bath it with *S. V. Camphorat.* And here all Medicines muſt be often changed.

Q. *How long are theſe to be applied?*

A. Till the Heat be abated, and the Skin recovers its Colour; for by uſing cooling Medicines too long, Lividneſs of the Skin, and ſometimes a Mortification is procured. If it be in the Head or Face, be very cautious in your Applications, and let them be rather Exſiccant than Repellent, till the Humour has ſpent it ſelf; Abſtinence and a cooling Regimen being here the beſt Method.

CHAP VI.

Of an Oedema.

Q. *WHat is an* Oedema?

A. It is a ſoft, looſe, white, cold *Tumor*, cauſed of *Phlegm*; which, if preſs'd with the Finger, pits; and is commonly without Pain.

Q. *What is* Phlegm?

A. It is the fourth Part of the Maſs of Blood; cold and moiſt, and is either *natural* or *excrementitious.* The natural is void of any foreign taſte, and ought rather to be called *pitutious Blood*, than *Phlegm.* Of the excrementitious or unnatural, there are three ſorts; (1.) Sour. (2.) Salt. (3.) That which ſhews like melted Glaſs; and is therefore called *Pituita*, *Vitrea*, &c.

Q. *What is the Signification of the Word* Oedema?

A. The Greeks call it οἴδημα, the Latins *Oedema*, and is the ſame with ὄγκος, which ſignifies *bunching out*; and ſo every *Tumor* may be called an *Oedema*; *but in a more ſtrict Senſe*, and according to *modern Writers*, it is taken for this particular *Tumor* cauſed of *Phlegm.*

Q. *What Prognoſticks can you make relating to it?*

A. It is commonly *a continuing Diſeaſe*, becauſe the natural Heat, in the Part it affects, is weak; but *it is not of it ſelf dangerous*, becauſe it is *moſtly* without Pain; but in conſumptive and dropſical Habits it is of ill Conſequence; not as it is a Diſeaſe, but as it ſhews the Decay of the natural Heat.

Q. *How will you perform its Cure?*

A. It

A. It is performed by Diet, internal Medicines, and local Applications.

Q. *What Diet would you adviſe your Patient to?*

A. Always to that which is drying, and to that which is roaſted, rather than boiled; Fiſh, Hogs-fleſh, Heads, Brains, Feet of Beaſts, and Sallads of cold Herbs, are all hurtful; but eat *Biſcuit*, or Bread well-bak'd, with Veal, Pullet, Rabbit, Chicken, *&c.* and daily drink Wine in moderation, and a Decoction, or Ale of *Guaicum*, *China*, *Saſſafras*, *Sarſa*, *Ginger*, *Cinnamon*, &c. and ſweat upon it. Be ſparing in Diet, but Labour, Study and Watch, becauſe theſe dry the Body. If it poſſeſs the Hands, Walking is good; but if the Feet, then ſit much, and work with the Hands.

Q. *What do you preſcribe internally?*

A. *Antimonial Medicines* are good, and to be uſed as Occaſion offers; alſo purge with *Pil. Cochiæ*, *de Hiera cum Agarico*, *de Hermodact. pulv. diaturbith. cum ehabarb. dioſenæ*, *coruachin. pil ex duobus Elect. cariocoſtin.* &c. with *Calomel*, which is a ſafe Method, carefully uſed.

Q. *What think you of* Phlebotomy *in this Diſeaſe?*

A. In a true *Oedema* I do not like it; Becauſe, (1.) in Bodies *cold* and *moiſt*, as are thoſe which are *Oedematous*, we never do it, excetp there be a *Plethora*. (2.) The *Matter* is not *malignant*; for which Reaſons I forbear it.

Q. *What are your local Applications?*

A. The Part is to be rubbed well with a Cloth, to open the Pores, for the Medicines to penetrate: Then uſe Bay-Salt *cum ol. olivar.* or Brandy or Bay-Salt with *Spaniſh* Wine, or the Patient's Urine. But in the State of the *Tumor*, when it is large, uſe this Fomentation, ℞ *fol. abſinth. abrotan*, *Cælaminth. origani. pulegii. Sambuci. Chamemel. ſalviæ.*

ſalviæ. Rutæ. ana Mj Bacc. lauri & Juniperi ana ℥j *ſem. fœnic. dauri, carni. cymini ana* ℥ſs *contundantur craſſ. modo. & in aq; Font. q. ſ. brilliant ad dimier. partis conſumptionem. Colætur, & adde S. V. q. ſ. & fiat ſolus.* and then uſe good Bandage, either by rolling, laced Stocking, Sleeve, Truſs or Glove. After fomenting, you may uſe Embrocate with *ol. Laurim Rutæ, de Caſtoreo ana* ℥ij *ſal. Macine* ℥ij *Ms.* and apply this Cataplaſm, ℞ *færrin. fabar. hordei ana* ℥vj *Sumit. Abſinth. Ratæ origani, abrotani pulv. ana* ℥ſs *flor. Sambuc. Chamemeli roſ. rub. pulv. ana* ℥iij *coquantur in prædict. fotu ad Cataplaſmatis conſiſtentiam addendo ſub finem celluminis & Sulph. vivi ana* ℥j *ol. oleam. olium.* ℥j *ol. rutæ & Mellis q. ſ.* Or if you would rather uſe a Plaiſter, *Empl. de Saponis* and *Diaſulphuris*, are proper Diſcutients here. With which the Part may be fomented, or large double Cloths wet in it, and apply'd over the whole Member; and with a good *double-headed Koller*, make good Bandage, by which the Humour will be ſent from the Part affected, to thoſe adjacent, and ſo the more readily carried off by Internals.

Q. *What Parts of the Body does this* Tumor *generally poſſeſs?*

A. The Hands and Legs, becauſe they are the fartheſt from the Heart, which is the Well-ſpring of Life, and alſo becauſe they are framed of cold Parts.

Q. *What Tumors are referred to an* Oedema *?*

A. Six: *viz.* Three which are contained in a *Ciſtis*, and three which are without; that is to ſay, (1.) *Atheroma*, (2.) *Steatoma*, and (3.) *Meliceris*; theſe three are contained in a *Ciſtis*: And the other three which are not ſo contained, are theſe, (1.) *Pſydracium*, (2.) *Ficus*, and (3.) *Talpa.*

Q. *How will you know an* Atheroma *?*

A. It

A. It has a Subſtance *like Curds* or *Rice-milk*; it proceeds from thick and groſs Phlegm.

Q. *How will you know a* Steatoma ?

A. It is not ſo big as *Atheroma*, and *contains a Matter like unto Greaſe*, or a Sweetbread-like Subſtance.

Q. *How will you diſcern a* Meliceris ?

A. It contains a Matter *reſembling Honey*, and is bred of thin Phlegm mingled with ſome Choler.

Q. *How do you diſtinguiſh a* Pſydracium ?

A. It is a pointed white Puſtle, containing a wateriſh Humor.

Q. *What is a* Ficus ?

A. It is called *Ficus*, becauſe its Roots reſemble that of a Fig; and its inner Subſtance is like that of a Fig alſo.

Q. *What is* Talpa ?

A. It is ſo called, becauſe as Moles heave up the Ground, ſo this Tumor lifts the Skin from the *Pericranium*, and is larger than a *Ficus*.

Q. *Is no other Tumor to be added to theſe* ?

A. Modern Authors add one they call *Nata*, which is large, and is ſo called becauſe it reſembles the Buttocks, called *Nates*; is without Pain, conſiſts of *pituitous* Fleſh, ſeated moſt commonly in the Neck, and is only cured by Exciſion.

Q. *What is* Ganglium, *and* Lupia, *Tumors ſo called* ?

A. They are round Tumors of the nervous Parts, without Pain; only *Ganglium* is hard, *Lupia* ſoft. *Lupia* may be moved every way, but *Ganglium* only towards the Sides, *&c.*

CHAP.

CHAP. VII.

Of a Scirrhus.

Q. *What is a* Scirrhus *Tumor ?*

A. It is a *Tumor* cauſed of Melancholy, or tough cold Phlegm, hard fixt, and without Pain: If it wholly come of Melancholy, it is of a Lead Colour; but if of Phlegm, it does not change the Colour of the Skin.

Q. *What is Melancholy ?*

A. The fourth Humor in the Maſs of Blood; yet natural, cold and dry.

Q. *Why is this* Tumor *hard* ?

A. Hardneſs is the Off-ſpring of Cold, Dryneſs, too great Repletion, or a Combination of all theſe together.

Q. *Why is it without Pain* ?

A. (1.) Becauſe the *animal Spirits* cannot paſs through an Humour ſo *glutinous*, as that which cauſeth a *Scirrhus*: Or, (2.) becauſe it is benumm'd with the Coldneſs of the Humor.

Q. *Wherein does it differ from other* Tumors ?

A. Herein it differs: A *Phlegmon* is attended with Pain; an *Eryſipelas* is not hard; an *Oedema* yields to the touch, and pits. *Wateriſh Tumors* have a thin clear Matter: And from a *Cancer* particularly it differs in theſe Reſpects; a *Cancer* is ever painful, *this* not at all; a *Cancer* is hot, *this* cold; a *Cancer* ſeizes the looſe and flaggy Parts, *this* the hard ones, as Joynts, Tendons and Ligaments; in a *Cancer* the Veins appear full and black, here not ſo.

A. What are the Prognoſticks in a Scirrhus ?

A. An

A. An *exquiſite Scirrhus* is incurable; and one leſs exquiſite, though it is ſeldom mortal, hardly admits any Cure, *or with much Dificulty*: A *Scirrhus* from Melancholy only, is warily to be managed, for fear it ſhould degenerate into a *Cancer*; but with that which is cauſed of Phlegm, you may be more bold.

Q. *Why is an exquiſite* Scirrhus *incurable?*

A. Becauſe the Part is deprived of the Influence of the *animal Spirits*, and the Faculty it ſelf is ſo ſtrangled, that it cannot help the natural Heat to concur with Means which may be uſed, *&c.*

Q. *What are the Indications of Cure?*

A. Diet, internal Medicines, and local Applications.

Q. *Is Phlebotomy profitable in a* Scirrhus?

A. If the Veins be full, the Blood black, and Age and Strength permit, it is by all means to be performed, becauſe the quantity being leſſened, the natural Heat will with more eaſe rule the reſt.

Q. *What is the Dyetetick Cure?*

A. All their Meat muſt be of an *eaſie Digeſtion*, moiſt, and of a *thin Juice*, as Chickens, Pullets, Lamb, Veal, Rabbets, Sallads, Spinage, *&c.* Their Drink ſmall Wine, Syder, or reaſonable ſtrong Beer. All ſalt Meats dried in the Smoak, Veniſon, coarſe Bread, *&c.* are hurtful.

Q. *What are your internal Medicines?*

A. Such as purge Melancholy and Phlegm; as *Confecto Hamech. Pil. de Lap. Lazuli, Extr. Helleb. Nigr.* given in Decoctions of *Senna, Polipody*, &c. theſe for Melancholy; and to purge Phlegm give *Diaphenicon, Pil. de Agaric. & Hermodact. Diaturbith*, &c. But it is thought, that nothing is better than conſtantly taking a Diet-drink of *Sarſaparilla, China, Guaicum*, &c. inſtead of com-

mon

mon Drink, and Sweat every Morning well upon it.

Q. *What are your external Applications?*

A. *Not repelling*; becauſe the Humor is thick and hard, and ſo unfit for Motion: but they ought to be *diſcuſſing* and *emollient*, and not *Emollients* alone, for thereby a *Scirrhus* is exaſperated, and ſo will be apt to turn Cancerous; *Unguent. Dialtheæ, Ol. Lillior, adeps human. anſeris Empl. Diach. cum Gum. Emucilaginibus, gum Bdellii, Amoniaci, Galbani*, &c. And before you apply any of theſe, foment the Part with *Decoct. Malv. flo. Cham. Meliot. Sambuci ſem Linï fenugræc. rad. altheæ*, &c, *cum aceto, & adde Sp. Vini, q. ſ.* And in dry Bodies, and where the *Scirrhus* is more confirmed, and fixed amongſt the Tendons, the Fume of Vinegar ſprinkled upon a hot Stone, often repeated, has it uſe herein.

Q. *Having briefly received Satisfaction, as to a* Phlegmon, Eryſipelas, Oedema, *and* Scirrhus, *which take their Original of the four Humors in the Maſs of Blood, (viz.) Blood, Choler, Phlegm, and Melancholy; now give me your Thoughts of* Aqueous Tumors.

CHAP.

CHAP. VIII.

Of Aqueous Tumors.

A. *Aqueous Tumors* are produc'd of the Superfluity of *Serum* of the Blood, after it has performed its Office; which moving the *expulsive Faculty*, part of it is sent to the Skin, which causes these *Tumors*.

Q. *What is this* Serum?

A. It is a Salt *Aquemous Humidity* contained in the Blood; which cannot be discerned, till the Blood, growing cold, this thin part is separated from the thicker by *Concretion*.

Q. *What Quantity of this* Serum *is there in the Blood?*

A. In a healthful Person the Quantity is but small, and no more than is fit to make thin the Blood, that it may with more ease pass to all Parts of the Body to afford them Nourishment; and this *Serum* has the same Matter with *Urine* and *Sweat*.

Q. *What is Urine?*

A. It is nothing more nor less than the Superfluity of this *Serum* mixed with the *Aqueous Humidity* of Meat and Drink, separated from the *sanguineous Mass* by the attractive Faculty of the *emulgent Veins and Kidneys*, and by the *Ureters* sent to the Bladder.

Q. *How is Superfluity of* Serum *sent to the Habit of Body?*

A. Partly, because the Weakness of the Kidneys will not suffer them sufficiently to draw it; partly because the Liver is too cold, and partly from Immoderation in drinking of Water, Wine, Ale, Cyder, *&c.*

Q.

Q. *What are the Signs of an* Aqueous Tumor?

A. It is ſometimes leſs, ſometimes bigger; yields when it is hard preſſed, is not painful, does not pit, and is attended with an itching in the Part, by reaſon of the ſaltneſs contained in the Humor. If they lye externally, they appear Reſplendent; and if they be deeper, and are ſhaded by the Hand and a Candle in a dark Room, a faint Tranſparency may be perceived: Thoſe that are contained in a *Cyſtis*, if the Tumor be large, an Indulation may be perceived, if they are ſhook, *&c.*

Q. *How will you perform the Curative Part?*

A. By convenient Diet, internal Medicines, external Applications, and manual Operation.

Q. *What is your Dyetetick Method?*

A. Eat Roaſt-meat, rather than boil'd; ſhun all Immoderation in Drink; Fleſh is better than Fiſh; and that is beſt to be of Kid, Veal, Rabbets, Land-fowl, Biskets, and Bread well baked, *&c.* ſhunning all Spoon-meat whatſoever.

Q. *What internal Medicines do you uſe?*

A. They are of three ſorts; (*viz.*) ſuch as purge by Stool, by Urine, or by Sweat, and *inſenſible Perſpiration.*

Q. *What are your* Catharticks, *or ſuch as purge by Stool?*

A. *Elaterium, gutta Gamba, Pil. de Euphorbio, Cochiæ, Rad. Jallap. Mechoacan. Syr. E. Spin. Cerv. Rad. Eſula Maj.* &c.

Q. *What are your* Diuretical *Means, or ſuch as provoke Urine?*

A. *Syr. Altheæ, Equinq; rädicibus, Hiſſopi,* &c. *Sal Prunel. Rheniſh-wine* ſtrained through *Broom-aſhes, Sal geniſtæ, Spir. Juniperi, Spir. Nitr. Dulc.* &c.

Q. *What are your* Sudorific *or ſweating Medicines?*

A. De-

A. *Decoct. Guaici, Sarsaparil. Sassafr. Egrimon. Beton. sem. fœniculi, Coriandr. Anisi,* &c. Give it often, as the Patient can bear Sweating; and give it warm.

Q. *What are your external Applications?*

A. They ought to be *such as discuss and rarifie the Skin,* that a breathing may be given to the *impacted Humor*; as *fol. Malv. farin. lupinor. ol. anethi. Cham. Vin. alb. q. s.* Of which make *Cataplasms.* Also Mustard, and Nettle-seeds, Brine, *Ammoniacum, Bdellium, ol. olivar. vet. Ceræ,* &c. Of which, according to Judgment, make Cerots. But, before the Application of this or any other Medicines, the Part is to be *well fomented* with a strong *Lixivium* made of *Broom-ashes, Absinth. Centaur. Calamint. Bacc. lauri. sem. Cymini fol. scordii, flo. Cham. Mellilot,* &c. and then embrocate the Part with this, ℞ *Sal. nitri* ʒx *piperis alb.* ʒvj *Euphorb.* ʒij *ol. laurin* ʒvj *misce.* And if after all, the Cure succeeds not, an *Apertion* must be made, to discharge the Water: But in an *Ascites,* which is commonly the Product of some Chronical Distemper, which took its orginal from Obstructions of the *Viscera,* the Tapping often has no good Effect: And (if the *Viscera* are corrupted) it commonly hastens the Patient's Death; especially if too much Water is let out at once.

Q. *What are the Differences of* Aqueous Tumors?

A. Those in the Head, are called *Hydrocephalus*; if in the Belly, *Ascites*; and if in the Cod, or *Scrotum, Hydrocele,* or *Hernia aquosa.*

Q. *How do you perform the manual Operation?*

A. It is done either by Incision or Caustick, which must be in a depending Part, and must be kept open by a Pipe of Lead; and lastly, cured as other *Tumors.*

CHAP.

CHAP. IX.

Of the King's Evil.

Q. *What is a* Scrophulous *Tumor?*

A. It is an hard *Tumor* of the *Glands*, incloſed in a *Ciſtis* of its own, bred of thick Phlegm.

Q. *How is it called?*

A. In Latin, *Scrophula*, and *Struma*; in Engliſh, *The King's Evil.*

Q. *Why is it call'd*, The King's Evil?

A. Becauſe the Cure of it has been reported by People of a ſtrong Faith, to be a particular *Gift of GOD* to the *Kings* and *Queens* of *England*, that are deſcended from the *Blood-Royal*, who cure it by their touch, tho' where that cannot be had, it comes under *Chirurgical Conſiderations*, which is undoubtedly the moſt certain way of cure.

Q. *What are its Differences?*

A. Sometimes it is lodged in *many Knots*, ſometimes *in few*; ſometimes *large*, ſometimes *ſmall*; ſometimes *mild*, ſometimes *malignant*; one is moveable, another not; ſome have Veins, Arteries and Nerves, others none, *&c.*

Q. *How do you diſtinguiſh it?*

A. I diſtinguiſh it from a *Gland*, becauſe that is ſoft, and without Pain; is ſingle, and ſlips when preſſed, and returns again, and is generally *cutaneous*: But *the Evil*, (on the contrary) if touched, feels hard and is painful, and generally conſiſts of many Knots, and lies deep. It is known from a *Ganglium*, for that is only in a *nervous Part*. *Nodes* are ſeparable from the ſubject Parts, and breed

breed in any; but the *Evil* ſticks faſt to the Fleſh, and is only in a *glandulous Part.*

Q. *What are the Prognoſticks?*

A. (1.) Every *Scrophula* is difficult of Cure, becauſe it is hard, it is contained in a *Ciſtis* of its own, and comes from a groſs Humor. (2.) The painful is more difficult than that without pain. (3.) The fixed worſe than the moveable. (4.) It is more difficult in the fore-part of the Neck than any where elſe. (5.) It ſometimes turns *Scirrhous* or *Cancerous.* (6.) It generally ſeizes Children, but ſeldom on grown Youths or Men; wherefore when it does ſo, it is the more difficult of Cure. See Mr. *Wiſeman*'s Surgery, who has treated Largely and Learnedly about it.

CHAP. X.

Of Ulcers *in general.*

Q. WHat *is an* Ulcer?

A. It is a *Solution of Unity* with loſs of Subſtance in any Part, either proceeding from an inward Cauſe *eroding* the Part, or from ſome external Force making a Wound, *&c.* which in proceſs of Time *degenerates* into an *Ulcer.*

Q. *How is it called?*

A. In Latin *Ulcus*, in Greek ἕλκος, ἀπὸ τοῦ ἕλκεσθαι, becauſe it disjoyneth the Part it poſſeſſeth; and ſo, in general, this Term comprehends every Solution of Continuity.

Q. *What are the Differences of* Ulcers?

A. Ulcers are of two ſorts, *viz. Simple* and *Compound*; now I call that a *Simple Ulcer*, which hath neither a Diſeaſe, Cauſe, nor Symptom

joyned to it, or complicate, beſides the Solution of Unity; but in a *Compound Ulcer*, either ſome of theſe, or all, are found.

Q. *What are your Prognoſticks in the Cure of* Ulcers?

A. In a Perſon of a good Complexion it is eaſie of Cure, and in a bad one the contrary; in *Moiſt* and *Hydropical Bodies*, in Aged Perſons, in Children, and in Women with Child, they are difficult of Cure: Thoſe in the *Spondils of the Back* and great Joynts, are moſt commonly Mortal; thoſe of a *round Figure* are more difficult of Cure than thoſe of any other form; in *Hectick* and *Hydropick Perſons* they are hardly Curable; if the Bone be *foul*, and the Ulcer *livid*, it is a bad Sign.

Q. *How will you know when a Bone is foul?*

A, (1.) If the *Ulcer* has been of long ſtanding. (2) If it has been ſiccatriz'd and breaks out again. (3.) If it yields more, and thin Matter than the bigneſs of it requires. (4.) If the Brims of the *Ulcer* will not contract. (5.) If on ſight of the Bone it appears black, diſcoloured or rugged: And, (6.) If it does not yield to rational Applications.

Q. *How do you diſcern the* Times *of an* Ulcer?

A. In the beginning the Matter is *wateriſh* and *thin*; in the increaſe, it flows more ſparingly but thicker; in the State there is no *Ichorous* Matter but *Pus*, yet it looks ſomewhat thinner; and in the *Declination*, *Laudable Pus* appears.

Q. *What is* Laudable Pus?

A. It is white, uniform, and without ill ſmell.

Q. *How is the Cure of an* Ulcer *performed?*

A (1.) By removing the Cauſe. (2.) By artificial Dreſſings.

Q. *What are the Cauſes?*

A. Ge-

A. Generally *Cachochimia*, and the *Diſtemperature* of the Part: The firſt has been ſpoke to before, in the Doctrine of *Tumors*; and the Diſtemperature of the Part is to be removed by Things contrary to it; and in order to it, a *convenient Diet* muſt be preſcribed.

Q. *How muſt it be dreſt*, according to Art?

A. In the beginning, *Digeſtives* are to be applied.

Q. *Why ſo?*

A. (1.) Becauſe the Matter which has left the Veſſels, and has inſinuated it ſelf within the *Pereoſities*, corrupts; wherefore it muſt be concocted, that it may become *Laudable Matter*. (2.) Fleſh will not generate, nor can *ſarcotical* Medicines take place, unleſs the Matter be concocted.

Q. *May* Digeſtives *be applied to all* Ulcers?

A. No: (1.) Not to *Putrid* Ulcers, for Digeſtives being hot and moiſt, would here cauſe the greater Putrefaction. (2.) Not to *Rheumatick* Ulcers, for Digeſtives relax the Part, and make it more ſubject to receive the Matter that flows.

Q. *What is to be done next?*

A. Repelling Medicines are to be applied about the *Ulcer*, to repel the Matter that flows. (1.) To prevent Fluxion from the Parts adjacent. (2.) To ſtrengthen them that they may reſiſt Fluxion. (3.) To further the Deſiccation of the *Ulcer*.

Q. *What are the Digeſtives?*

A. *Pic. Rezin. Cera, Unguent. Baſilic. Aureum*, &c. *cum Mercur. precipit. Rubr. far. tritic. Hordei*, &c.

Q. *What are your* Repelling *Medicines?*

A. *Succ. Cydonior. plantag. acet. vin. Rub. ſol. Roſ. Rub. ol. Mirtil. Maſtic. Unguent. alb. populeon. ter. ſigillat. far. fabar.* &c. Of Emplaiſters, *Empl. de*

Minio. de Sapone, Diapalma Diacalciteos, &c. with hadſom Bandage.

Q. *What is next to be done?*

A. After good Digeſtion, I *mundifie* or *cleanſe*; for if we apply *incarnative Medicines* before the *Ulcer* is well digeſted and cleanſed, *ſpongy Fleſh* will grow in ſpite of all Endeavours; and ſo by conſequence we cannot *Siccatrize.*

Q. *How will you know when an* Ulcer *is well digeſted?*

A. If the *Quittor* is pretty Laudable, and if the Edges of the *Ulcer* is well-coloured and ſoft, *&c.*

Q. *What are your* Mundifying *Medicines?*

A. *Rad. ariſtol. Rot. & long. virid. Æris, Merc. precipit. Rub. Mel. allum. uſt. ſucc. apii, Mundificativ. paracelſ. & ex apio. Unguent. Apoſtolorum, Unguent. Baſilic. cum Mercur. precipit Rub. allum. uſt.* &c.

Q. *How will you know when an* Ulcer *is ſufficiently mundified?*

A. When I ſee it appears red, ſenſible, clean, and neither too dry nor too moiſt.

Q. *What more is to be done?*

A. I am next to *Incarn,* or fill with Fleſh.

Q. *What Medicines will you make uſe of?*

A. *Maſtich, Mirrh Sarcocol. Gum Elemi, tereb. venet. thuſ. oliban. auxung. porcin. liniment arcei, Unguent. aureum,* &c.

Q. *What Rule is there in Compounding of them?*

A. They muſt not be either too ſoft, nor too hard; for if they be too hard, the weak Part cannot well have the benefit of them; and if they be too ſoft the Heat of the Part will cauſe them to ſpread, and breed a *Fungus.*

Q. *But ſuppoſe a* Fungus *ſhould ariſe, how will you abate it?*

A. Then

A. Then I uſe either *ſtrong Deſiccatives, Cathereticks,* or *corrupting Medicines.*

Q. *How do you time the Application of theſe?*

A. If the *Fungus* be ſoft and but beginning, I uſe ſtrong Deſiccatives only; ſuch as, *Ter. ſigillat. lemnia, bol. alloes, croc. Martis, Minium, Ceruſſa, litharg. auri, allum. vit. Rom.* &c.

Q. *But ſuppoſe you find theſe not powerful enough?*

A. Then I uſe *Cathereticks;* theſe burn, but gently, being hot and dry in the fourth Degree, and only ſuperficially dry and corrode the Fleſh; (*viz.*) *Allum uſt. virid. Æris, Merc. precipit. Rub. turb. miner. Unguent. Apoſtolor. Ægiptiac.* &c.

Q. *If the* Fungus *is ſo hard and compact, that it reſiſts theſe Medicines, what muſt then be done?*

A. In this Caſe ſome uſe *Eſcharoticks,* ſuch as *Lapis Infernalis,* and the Lunar Cauſtick; but theſe are dangerous Medicines, and ought to be managed by a skilful Hand; alſo *Merc. ſublimat.* mix'd with calcin'd *Roman Vitriol,* and *ter. ſigillat.* or *turb. Min.* mingled with the ſame; *Ol. Vit. Ol. Sulph. Aq; Fortis,* &c. and the *actual Cautery;* all which are attended with Pain and Difficulty, and ought never to be uſed but in *urgent Neceſſity,* but rather uſe *Fallopius*'s *Catheretical Lint,* (viz.) ℞ *Aq; Plantag. Roſ. Solani, ana* ℥iv *opii* ℈j *Medul panis* ℥ij *Merc. ſublimat.* ℈iv *ſuper porphir. trit. omnia hæc commixta bulliant ad Conſumpt. Med. dein. Colent. per pannum Craſiuſculum. Fila excerpta bulliant aliquandiu in hoc liquore, poſtea Eximantur ſiccentur, ac ſerv. ad uſum.*

Q. *We will now ſuppoſe the* Fungus *removed, but what will you do next?*

A. I muſt next endeavour to *ſiccatrize,* or skin the *Ulcer,* if it be filled up nearly ſmooth.

Q. *How is this performed?*

A. By *Epuloticks*; as *Ter. ſigillat. Æs uſtum, Minium, Ceruſſ. Empl. Diapalm. Unguent. Deſic. Rub. Empl. de Minio* —— *Unguent. alb. Camph. Aq; Calcis, Unguent. Diapomph. Vitr. Rom.* &c.

Q. *At what Time are* Epuloticks *to be applied?*

A. Before the Fleſh is even with the Skin, or whilſt there is ſome Cavity; for if this be not minded, the *Siccatrize* is apt to be higher than it ought, and ſo would cauſe a Deformity.

Q. *You have given me the Signs of a corrupt or foul Bone; pray tell me* how you will exfoliate or ſcale it, *in order to Cure the* Ulcer, *and then we will proceed to particular* Ulcers?

A. Firſt, the Bone is to be laid bare; and, 2ly, the Scaling of the Bone is to be effected by proper Means.

Q. *How is the Bone to be laid bare?*

A. Three Ways; (1.) By Inciſion. (2.) By the Potential Cautery; as *Lapis Infernalis*, the Lunar Cauſtick, *&c.* Or, (3.) By Dilatation, inlarging the *Ulcer*, tho' the Bone appears but a little: And this is done by *Spunge dipt in ſome Melilot-plaiſter*, and preſs'd hard till it is cold, and then cut out into Tents; alſo Tents made of *Gentian*, or Pith of Elder.

Q. *Are either of theſe to be uſed to all Parts indifferently?*

A. No: The Potential Cautery is not to be uſed, where many Nerves of Tendons are, leſt they cauſe (by their great Pain) *ſymptomatical Feavers* and *Convulſions*; but they are rather to be applied where there is a *Caries* of the *Ulna* and *Tibia*. Dilatation is to be uſed where Inciſion or the Potential Cautery may not; (*viz.*) On the Back of the Hand, Inſtep, and *Metatarſus*; nor may Inciſion be uſed at all *where Bones lye deep*, and have Veins, Tendons, and Arteries above them.

Q. *The*

Q. *The Bone being bare, how is it to be ſcaled?*

A. By Medecines, Inſtruments, or actual Cautery.

Q. *What are your* deſquamatory *Medicines?*

A. They ought to be very drying; and if the *Caries* be only ſuperficial, thoſe of the firſt ſort may ſerve; as, *Pulv. Mirrh. Rad. ariſtol. Rot.* &c. And if the *Carioſity* be ſomething deep, a ſecond ſort muſt be uſed; as, *Rad. peucedan. Euphorb. Alloes*, &c. And if the *Caries* be very deep, we muſt uſe *Tinct. Euphorb. Ol. Carioph. Ol. Sulph. Vit. Rom. Calcinat.* &c.

Q. *If it be done by Medicines, how long Time will it require?*

A. If they be rightly applied, about 40 Days will do the Work.

Q *But ſuppoſe the* Caries *will not yield to Medicines, what then?*

A. Then we muſt have recourſe to Inſtruments; the principal of which is, *Mallet*, *Chiſſel*, and *Raſpatory*; the *Caries* is to be taken off with the two firſt, and the Bone to be ſmoothed by the laſt: And then ſome of the former *deſquamatory Medicines* muſt be applied; but if *both Tables* of the *Cranium* be foul, we muſt uſe the *Trepan*: The Uſe of which ſhall be treated of in another Place.

Q. *How is the Bone to be ſcaled by* actual Cautery?

A. The *Cautery* is to be *red-hot*; and, if the Bone lie deep, it is to be conveyed to it *through a Pipe of Iron*; and, if it be ſuperfical, the Parts are to be covered by double Implaiſter, to prevent their being burnt.

Q. *May it be applied to any Part?*

A. No: Not to the *Scull*, nor *Vertebræ* of the Back; becauſe of hurting the Brain in the one, and the *Spinalis Medulla* in the other.

Q. *How is the Bone to be dreſs'd after Cauterizing?*

A. For ſome few Dreſſings, to hinder Inflammation, uſe *Aq; Roſar.* and *Alb. ovi;* and then apply to it *exfoliating Medicines.* Some uſe for the firſt three Days, *Ol. Roſar. cum Alb. ovi;* and for three other Days, *Ol. Roſar. & vitel ovi;* and afterwards, *Butyr. cum Mel Roſar.* and over that *ſome Deterſive:* And continue this Method till the Bone ſcales; and afterwards Incarn and Conſolidate with *Rad. ariſtol, Iris, Mirrh.* and ſuch like.

Q. *What do Surgeons mean by* Sordes, Ichor, *and* Sanies, *in* Ulcers?

A. The Excrement which they call *Sordes,* is thick and glutinous; that which they call *Ichor,* is thin and wateriſh, like to Water wherein Fleſh has been boiled, having received no alteration, but has flowed pure, as it is in the Veins and Fleſh. *Sanies,* or *Virus,* is thin alſo, but has received ſome alteration, by the temperature of the Part.

CHAP.

CHAP. XI.

Of a Simple, Plain, and Hollow Ulcer.

Q. *IN the laſt Chapter, you told me the Difference between a ſimple and compound* Ulcer, *pray tell me now, how many Kinds of Simple* Ulcers *there are?*

A. Two: The one is plain, and equal to the natural Skin, and wherein only the *Cutis* and *Cuticula* are loſt; the ſecond is hollow, wherein beſides the *Cutis* and *Cuticula*, part of the Fleſh is gone alſo.

Q. *How will you effect the Cure?*

A. One Method ſerves for both. If the Blood be not pure, it is to be altered; as, if it be *too thin, thick, hot*, or *cold*; if it offends either in *Quantity* or *Quality*, the Patient is to be managed accordingly; the *Non-naturals* are to be diſcretely ordered, and the Patient kept in a due Temper, *&c.*

Q. *What are the* Non-naturals *?*

A. (1.) Exceſs in Eating or Abſtinence. (2.) Too much Motion or Reſt. (3) Too much Sleep or Watching. (4) Too much Evacuation or Retention. (5.) Too much Perturbation of Mind. (6.) The Air too hot, cold, dry or moiſt.

Q. *What are the Prognoſticks in Simple* Ulcers?

A. The Cure becomes difficult or eaſie, according to the Nature of the Part ulcerated, and the Diet of the Patient. They are more eaſily Cured in a *fleſhy Part*, than in a *Joynt* or *Nervous Part*; ſo more eaſie in a *temperate Perſon* than in one given to *Debauchery*.

Q. *What*

Q. *What is your Method of Cure?*

A. Digeſt with *Terebinth lot. in aq; Font. & adde vitell. ovi.* or any Digeſtive in uſe, according to Occaſion: Or you may both digeſt, deterge, and incarn, by *Unguent. Baſilic.* alone, or mixed with *Libinc. arcei, & Merc. precipit. rub.* in fit Quantities; and over this, *Emplaiſtr. de Urinio, Diapalma* or *Diacalciteos,* and, if need be, a Cloth wrung out of red Wine, over all. When it is well digeſted, Mundifie, Incarn and Siccatrize, as directed in the former Chapter.

CHAP. XII.

Of Compound, but Mild, Ulcers *in general.*

Q. *YOU have already told me, that a compound* Ulcer *has a Diſeaſe, or a Cauſe, or Symptom annexed to it; pray tell me now what you mean by theſe?*

A. Many Diſeaſes in Man's Body keep *Ulcers* from healing; ſome corrupt the Humours, as the *Leproſie* and *French-Pox*; ſome hinder laudable Blood to be ſent in ſufficient quantity, as the *Phthiſis* and *Hectick Feaver*; and ſome ſend too much wateriſh Humours with the Blood, as the *Dropſie*, &c. All which hinder the Union of the ulcerated Part.

Q. *Proceed.*

A. If the Humour offend in quantity, it is to be abated by *Phlebotomy, Catharticks,* and ſlender Diet; if it offend both in quantity and quality, we are to uſe both purging and altering Medicines. So far of its Proceſs, accompanied with a Diſeaſe, we next come to diſcourſe of it, as it has

has a Cauſe annexed to it, and that is the Diſtemperature of the Part.

Q. *What is that?*

A. The ſingle Diſtemperatures are in number four; (*viz.*) *too dry, too moiſt, too hot, and too cold.*

Q. *How do you know the dry Diſtemperature?*

A. The Colour of the *Ulcer* is ill to look to; if you touch it, it ſeems hard and dry, and little or no Matter flows from it.

Q. *How is it to be removed?*

A. If the Body be *plethorick* or *cacochimick*, in the firſt place bleed and purge; then *foment* with warm Water, and apply Water and Oil mixed, a Cloth or Pledget being wet in it, and laid over the *Ulcer.*

Q. *How long will you uſe this Method?*

A. Till the Part is a little tumified, ſoft and moiſt, and of a ruddy Colour.

Q. *How do you know a moiſt Diſtemperature?*

A. The Fleſh will be apt to be moiſt, a *Fungus* will be apt to grow, and plenty of Excrements will flow from the *Ulcer.*

Q. *How is it to be removed?*

A. Strong *Sarcoticks*, or *Deſiccatives* mixed with Digeſtives or Incarnatives are to be uſed; *viz. Plumb. uſt. lap. calaminar. rad. irid. gum Oliban. maſtich, Æſ. uſtum*, &c.

Q. *How is a hot Diſtemperature known?*

A. The ulcerated Part will be ſomewhat tumified, hard and red, and the Party's Complaint, and your own touch, will inform you.

Q. *How is this to be removed?*

A. Diſſolve ℥ij *of Allum Roch.* in *aq*; *Plantag.* ℔j or diſſolve *vit. Alb.* or *vit. Rom.* in *aq*; *plantag.* or *aq*; *Sperm. Ranar.* &c.

Q. *How do you know a cold Diſtemperature?*

A. By

A. By its colour, hardneſs, ſenſe of the Patient, and your own feeling.

Q. *How is this to be remedied?*

A. (1.) Foment the Part with a Fomentation made *ex Cereviſſ. fort.* wherein has been boiled *Calamint. Centaur. Abſynth. Chamemel. tanaſet. Scord. Ruta.* &c Then dreſs the *Ulcer* with a Digeſtive and an Emplaiſter *ex Paracelſ. Diach. cum Gum de Mucilaginib.* &c. over all.

Q *What do you mean by a Symptom annexed to an* Ulcer?

A. Chiefly *Pain*; which by attraction brings Humidity to the Part, and ſo obſtructs the Cure; it alſo inflames the Part, cauſeth Watching, Fainting, and ſometimes Convulſions.

Q. *How is Pain to be removed?*

A. Two Ways: (1.) By taking away its Cauſe, which is Affluxion of Humors. (2.) By application of anodine Medicines; both which have been ſpoken to, in the Doctrine of Tumors, *Page* 2, 6, *&c.* Out of which frame Cataplaſms or other Dreſſings at your Diſcretion.

CHAP.

CHAP. XIII.

Of a Sinuous Ulcer, *without any Calloſity.*

Q. *WHat is a Sinuous* Ulcer ?

A. Surgeons call that *Ulcus Sinuoſum* which is like a *Coney-burrow* ; they are ſometimes *ſuperficial*, ſometimes *deep*, ſometimes *ſtrait*, and ſometimes *oblique*, &c. Some of which have neither Hardneſs nor *Calloſity*, which we term *Ulcera Cavernoſa* ; and ſome have both Hardneſs and *Calloſity*, and theſe are called *Fiſtulæ.*

Q. *How is* Ulcera Cavernoſa, *without* Calloſity, *cured* ?

A. (1.) By Injection of fit Medicines without opening. (2.) By opening, and dreſſing it artificially.

Q. *Suppoſe you was to do it without opening, how would you proceed* ?

A. Firſt the Cavity is to be filled with Fleſh, and the disjoyned Parts are to be agglutinated.

Q. *Of what Nature ought the Applications to be* ?

A. The *Incarnatives* muſt dry without *Eroſion*, and the *Glutinatives* muſt have both *Aſtriction* and *Dryneſs.*

Q. *What Medicines are they* ?

A. An Injection of *Aq; Hord. Mel. Roſar. Myrrh. Sarcocol. Bacc. Mirt. Sumach. rad. Tormentil. Spirit. Vin.* &c. fitted in due Proportions, and ſtrongly boiled, and injected warm.

Q. *How will you know when 'tis ſufficiently mundified* ?

A. When I find the *Quittor* neither ſtinking, reddiſh, pale, black, nor wateriſh.

Q. *Well;*

Q. *Well; but if it be not enough mundified, how will you proceed?*

A. Then I will form Injections *ex Centaur. Absynth. Marrub. Alb. Card. Ben.* &c. decocted in Wine, with an Addition of *Mel Egyptiac. & Mel Rosar.* &c.

Q. *How is it to be dressed artificially?*

A. (1.) Lay upon it (the whole length of the Cavity) *Empl. ad Herniam*, and then inject your Medicine; then put in a short leaden Pipe, having the Brims turned back, to keep it from slipping in, then shut up the Orifice and the Tent with a bit of the aforesaid Emplaister, snipp'd in the middle, to let out the *Quittor*; above that, place a Piece of Spunge, moistened with the Medicine with which you dress the Ulcer; and over that place a Pledget of Tow: On the Cavity of the Ulcer lay a thick Bolster; and over all, a soft Linen-cloth double; then begin your rowling at the bottom, where it must be something strait, (but not so as to cause Pain) to press out the *Quittor*, and cause *Agglutination.*

Q. *How often is it to be dressed?*

A. If much Matter does not flow, dress it every third Day.

Q. *How will you know if it is about to agglutinate?*

A. If I find the Matter abate, is laudable in Colour and Consistence, and have no ill smell, and if the Cavity be without Pain and Tumor.

Q. *But why must it be dress'd so seldom?*

A. Because often dressing gives way to cold Air, which hinders union.

Q. *But what must be done if the* Cavity *be lower than the* Orifice?

A. Way must be made for the *Quittor* two Ways: (1.) Either by opening the lower-end of the *Sinus* only; Or, (2.) By laying open the whole

whole Cavity; for if one of these be not done, no Cure can be expected.

Q. *In what Cavities will you lay open the lower-end [only]?*

A. (1.) If the *Sinus* be of an extravagant bigness. (2.) Or if it be in a great Joynt: Or, If there be Nerves, Tendons, great Veins, or Arteries in the way, the Reasons of which are evident.

Q. *How are these Ways to be performed?*

A. By Caustick, or Incision.

Q. *In what Cases is a Caustick most proper?*

A. (1). If the Patient be timerous. (2.) If he be sick and weak. (3.) If it be in a Part that may cause Deformity. (4.) If there is fear of a Flux of Blood.

Q. *What do you observe in applying your* Caustick*s?*

A. If the Situation of the Part or Member wherein the *Sinus* is, be in the upper side, then *Lapis Infernalis* is best; but if on the lower side, then the *common Caustick* is best.

Q. *How will you open it by Incision?*

A. Either with an Incision-knife and Directory, or with the Probe-scizzers, which is best; then fill it with Dorsels, to keep the Lips asunder, and arm them with Rectitives, as in other Cases.

Q. *But what if you find, that notwithstanding all this, the Ulcer does not heal as you expect?*

A. Then I must give Drinks made of *Sarsaparilla, Guaicum, China, Egrimon. Hyperic. virg. aurea, sigil. Solomon. rad. symphit. torment. bistort. marub.* &c. Which the Patient must drink of, for three Weeks or a Month, and keep to a spare Diet, and such as must be of easie digestion: Or let the Patient take ℥j of *Tinctura Gum Guaici*, in Syrup of Damask Rose-water, and then mixed with a Glass

of

of Wine in the Morning faſting, half an Hour before Dinner, and laſt at Night, going to Bed. The Preſcription is this ; ℞ *Spirit Vin. Rect.* ℔ij *pulv. gum Guaici* ℥iv *diſſolv. in Balneo, till the Tincture becomes reddiſh*, &c.

CHAP. XIV.

Of the palliative Cure of Sinuous Ulcers *or* Fiſtula's *with Calloſity in general.*

Q. *WHat is a* Fiſtula ?

A. It is a *ſinuous Ulcer*, narrow, and long, with *Calloſity* and *virulent ſtinking Matter*, with little Pain.

Q. *How will you know to what Part the* Fiſtula *paſſeth ?*

A. If it paſſeth to the fleſhy Parts, the Matter appears white, ſmooth and plentiful, and the Part where your Probe ſtops, ſeems ſoft. If it paſs to a Nerve, a fat and oily Matter comes forth ; the Motion which is cauſed by that Nerve is impaired, and the *Fiſtula* is more than ordinary painful, and the bottom being touched by your Probe, cauſeth a Pain and Numbneſs. If it paſs to the Veins and Arteries, yet ſo as their Coats be not *eroded*, then the Matter looks like Lees of red Wine ; if it has *corroded* a Vein, Blood iſſues out thick, of a dark Colour, without impetuoſity ; but if an Artery be wounded, the Blood is more red, bright, and comes forth with leaping and violence ; if it has paſſed to the Bone, and that be corrupt, the Matter is yellow, of an ill ſcent, and the Bone is to be felt rough, uneven, *&c.*

Q. *What*

Q. *What Preſages can you make, concerning the Cure of* Fiſtula's?

A. No *Fiſtula* is of eaſie Cure; (1.) Becauſe of the Unfitneſs of the Part to receive proper Medicines. (2.) By Reaſon of the quality of the Medicines, which muſt be ſharp and biting, and ſo cauſe Pain; from whence often comes Feavers and Faintings, *&c.* (3.) Thoſe which are ſuperficial are more eaſie of Cure than thoſe which are deep. (4.) Thoſe with many *Sinuoſities*, require Inciſion. (5) In thoſe ending on Veins and Arteries, you are to encounter with *Hemorrhages*. (6.) In thoſe on the Nerves and Tendons, with *Pain* and *Numbneſs*. (7.) Where the End is more depending than the Orifice, it is hard of Cure. (8.) In *Fiſtula's* of the Back, if the *Spine* be carious, ſhun the Cure. (9.) *Fiſtula*'s in the Joynts are dangerous. (10.) *Fiſtula*'s of a long ſtanding, in a depending remote Part, by which Nature hath been uſed to diſcharge her ſelf of Superfluities, if they are not painful, may rather be kept open than cured; for they hinder Diſeaſes, and keep the Body in Health.

Q. *What do you call a* palliative Cure?

A. It is when a *Sinuoſity* is inwardly dried for a time, and the Orifice ſeems ſhut up by a thin Skin, until new Moiſture open the Orifice again: or it is a Method whereby it is not ſuffer'd to grow worſe, but by Art is made more eaſie, and the Life of the Patient is more comfortable than otherwiſe it would be.

Q. *How is this done?*

A. (1.) By a convenient Diet, feeding on ſuch Meats as are of an eaſie Digeſtion and afford good Juice, the Body is to be purged by gentle Means, either by Diet-drinks or purging Ale, made of *Sarſa. Rad. Cimphit. Polipod. Tormentil. Hermodact.*

fol. ſen. Rad. Liquor. ſem Aniſi, Guaicum, ſanicul. alchimil, &c. and drink of it three times a day. (2) By local Applications. Injections of *Aq; Calcis, Syr. Roſ. ſicc. Syr. Mirtillor. Litharg. auri,* &c. Or, *Ex Aq; Plantag. Vit. Rom.* &c. injected warm: Lay to the Orifice a Pledget of Lint wet in the ſame, *and above that a Diapalma Plaiſter,* &c. and dreſs it only every other Day.

CHAP. XV.

Of the true Cure of Fiſtula's *in general.*

Q. *BY what Means will you attain to the Cure of a* Fiſtula?

A. By Diet, Medicine, and manual Operation.

Q. *What Diet do you adviſe?*

A. The ſame as in the Cure of an Ulcer, but it ought to be taken very ſparingly, and ſuch as is of eaſie Digeſtion.

Q. *What is your* pharmaceutical, *or medicinal Method?*

A. If *Cacochimia* or *Plethora* poſſeſs the Body, take for ſome time ſome *purging Ale,* compoſed of *Sarſaparilla, Guaicum, Rad. Biſtort. Simphit. Tormentil. Pollipod. fol. Alchimil. Sanicul. fol. Sen. Sem. aniſi, Fenicul. Rad. Glicirrh.* &c. Alſo you may give *Elect. Cariocoſtin. E. ſucco Roſar.* &c. After the uſe of theſe, you may give a *conſolidative Drink* made of *Rad. Oſmond. Regal. Centaur. Min. Egrimon. vinca pervinca, virga aurea, Simphit. Plantag. Equiſet,* &c. Which is to be drank of, three or four times a Day, a Pint at a time, which may be ſweeten'd with Sugar, if the Patient will.

Q. *What is your Chirurgical Method?*

A.

A. (1.) The *Fistula* is to be *dilated.* (2.) The *Callus* is to be *removed.* (3.) The *Part* is to be *mundified.* (4.) *Union* or *Consolidation* is to be *procured.* (5.) And then it is to be *ficcatrized.*

Q. *How is it to be dilated?*

A. Three several Ways: As, (1.) By Incision. (2) By Tents of Sponge, or *Rad. Genitian*, or Pith of Elder. And, (3.) By the *Fistula Tent.*

Q. *In what Cases will you make Incision?*

A. If the *Fistula* is not deep, and in strong Bodies; but if it has many *Sinuosities*, or a *Callosity*, the one is to be dilated, and the other removed, before Incision be made.

Q. *How do you prepare your* Sponge Tents?

A. Melt a sufficient quantity of *Melilot Plaister*; and, whilst it is hot, put a Sponge into it, to suck it up; then take it and put it into a Press, and squeeze it hard, where let it remain till cold; then cut it out into Tents of what form you please.

Q. *How is the* Fistula Tent *prepar'd?*

A. Take all the *Down* (without any of the Threads) of *fine Lint*, with which mix some of the White of an Egg beaten, and make Tents of what length your *Fistula* requires; make them upon a smooth *Deal Board*, and dry them, which will be stiff and pierce like a Probe, and which may be armed with fit Medicines, *&c.*

Q. *How must the* Callosity *be removed?*

A. Either by *Medicines* or the *actual Cautery.*

Q. *What are the Medicines?*

A. (1.) Mild. (2.) More harsh. (3.) Such as are caustick. The first sort are of an emollient, digestive quality, and to be used if the Callous be but small, in a fleshy Part, and a young Patient: As *Unguent. Dialthææ*, or *Nicotianæ* mixed with *Turbith mineral.* or *Precipit. Rub.* &c. Of the second sort are *Unguent. Apostolor. cum Turb. min. vel*

precipit. Rub. allum uſt. &c Of the third ſort, *viz. Cauſticks*, ſome are more gentle, as *Auripigment. Calc. viv. Sulph. viv.* &c. Of the ſecond ſort, are *Virid. Æris, Vitr. calcinat. allum uſt. Turb. min. Vitriol. vomitive*, &c mixed in fit Proportions, which are thus to be uſed: If the *Fiſtula* is dilated by Inciſion, ſprinkle the *Callus* with ſome of theſe Powders: Or, if you uſe Tents, mix theſe Powders with ſome *Populeon*, and arm your Tents with it. But where there is great *Calloſity*, and the *Sinus* ſmall, and its Mouth fungus, I uſe the following Trochet; ℞ *Mic. panis* ℥ij *vel. q. ſ. pulv. ſubtilliſſ. Mercur. Sublimati* ℥ſs *pulv. plumb. Rub. & rad. gentiane ana* ℥ij *miſce.* Of theſe (being well incorporated) make Troches and Tents of diverſe Forms, and dry them, and either put one into the *Fiſtula*, or upon its Mouth, or (if ſuperficial) its whole Length, and in 12 Hours it will do its work effectually and ſafely, and with but little Pain: But take care it be not apply'd to Nerves or Arteries, for fear of Miſchief.

Q. *Very well; but what is to be done afterwards?*

A. You muſt, twice a Day, apply to the Part an *Anodine Cataplaſm*, and you muſt let the Tent remain in the *Fiſtula*, till it falls out of it ſelf; becauſe they will (by ſo doing) bring the *Callus* out with them: And as to the *actual Cautery*, it is to be uſed as ſeldom as poſſible, and with great Caution, as the able Surgeon ſees fit.

Q. *How will you mundifie?*

A By *Unguent. Egyptiac.* mixed with Brandy or Wine, and injected warm once a Day.

Q. *How will you conſolidate, or unite the Parts?*

A. Decoct *Rad. ariſt. Rot. torment. biſtort. ſymphit. Centaur. Min virg. aurea, ſigil. Solomon. Plantag.* &c. very ſtrongly; then, whilſt warm, add to every Pint *Mel. Angl.* ℥iv; boil it again; ſtrain and clarifie

rifie it; which inject into the *Fiſtula* warm, and dreſs it, as directed in the Cure of a ſinuous Ulcer.

Q. *How is it to be* ſiccatrized?

A. That calls for no new Directions.

Q. *How ſhall I know when it is near cured?*

A. You may judge it to be ſo, when the Humour is thick, little, white, even, and the Place void of Pain and Tumor.

CHAP. XVI.

Of Fiſtula Lachrymalis.

Q. *What is a* Fiſtula Lachrymalis?

A. A Tumor called *Anchilops*, ariſing between the great Corner of the Eye and the Noſe; if it apoſtemates, 'tis called *Ægilops*; which, being neglected, degenerates into a *Fiſtula*, even quite to the Bone, which is called *Fiſtula Lachrymalis*.

Q. *What are the Signs of it?*

A. (1.) It is known by its Orifice. (2.) By preſſing with the Finger, the Matter iſſues out. (3.) By paſſing a ſmall Probe to the end of its *Sinus*.

Q. *What are the Prognoſticks?*

A. (1.) All theſe *Fiſtula*'s are of hard cure. (2.) If the *Quittor* has made its way into the inner Paſſage of the Noſe, it is not to be cured. (3.) If it *turns cancerous*, we are only to uſe a *palliative Cure*. (4.) If it continues long, it cauſes a Conſumption of the Eye, or Blindneſs.

Q. *Why are they of hard Cure?*

A. (1.) By reaſon of the Humidity of the Part. (2.) By reaſon of its continual Motion.

And, laſtly, by reaſon of the tenderneſs of the place.

Q. *By what Signs do you know it to be* cancerous?

A. By its livid, hard Brims, exquiſite Pain, and *fœtid virulent Matter.*

Q. *How will you cure a* Fiſtula Lachrymalis *not cancerous?*

A. (1.) Dilate it with the *Fiſtula*-Tent, and then enlarge it with the Sponge-Tent. (2.) You are to remove the *Calloſity* with *Merc. precipit. Rub. turb. Min. lot. Unguent. popul.* &c. as before directed. (3.) You muſt mundifie with *Mel. Roſar in Aq; Rutæ* warm, once a Day. (4.) Conſolidate with *Aq; plantag. cum Syr. E. Roſ. ſicc.* And, 5.) Siccatrize with *Empl. de minio, Diapalma. cum ſuccis*, &c.

Q. *How will you do if the Bone be foul?*

A. This is rectified two Ways; (1.) By actual Cautery. (2.) By Inciſion.

Q. *As how?*

A. The actual Cautery *carries Horror with it*; yet moſt Authors like it as the beſt Way. It muſt be made in the Form of an Olive-ſtone, and the Parts are to be defended from the Fire with a hollow Plate or Cane; and afterwards apply to it Pledgets dipped in *Vin. Rub.* and over all *Diapalma*, &c. till the Bone ſcales; then manage it as has been before directed.

Q. *How is the Inciſion to be made?*

A. Having with a Probe found out the Cavity, both upwards and downwards, draw a Line with Ink, between the *Glands* of the Eye and the *Trochlea*, thro' which the *ſmall Tendon* of the *Muſculus ſuperior (vel major)* paſſeth, and ends obliquely in the ſuperior part of the *Cornea*; then make Inciſion to the Bone, and dilate the Inciſion with your Nails; then thruſt in a ſmall *Troch* made of *Turb. Min. ter. ſigil. & populeon.* and about it lay

a

a Pledget of *Populeon*, and over that *Empl. Diapalm.* and with fit Boulstering and Bandage roul it up, first filling the *Orbit* of the Eye with soft Linnen Boulsters dipped in *Aq; Sparm. Ranar.*

Q. *How long is this Method to be used?*

A. Morning and Evening, until the *Troch* with the *Callus* fall out of its own accord; and then upon the Bone, so far as it is carious, I apply *Pulv. Euphorb.* then fill up the Cavity with a piece of Sponge prepared with *Mellilot*; over that a Pledget of *Unguent. Popul.* and an Emplaister, and roul it up, as before directed.

Q. *How long are these Dressings to be used?*

A. Until the Bone scales, which is about 20 Days after; then *mundifie*, *consolidate* and *siccatrize*, as before directed.

Q. *But Suppose that the whole Substance of the Bone of the Nose joyning to the* Fistula *be foul, and so (after the* Fistula *be healed) it breaks out again?*

A. Then enlarge the *Sinuosity* till the corrupt Bone appears; then pierce the Bone of the Nose with *some fit Instrument*, that the *Quittor* may discharge thro' the Nostrils; and proceed to heal, as is directed in the *palliative Cure.*

Q. *But if it prove* cancerous, *how will you proceed?*

A. The best Medicine, in this Case, is quoted by Dr. *Read* (the Surgeon, not the Quack) from *Heurnius*, and is this: ℞ *Calaminar. ter ust. atque in vim. acet. Extinct.* ℥j *Mirrh. plumb. ust. & lot. ana* ℈s *Croci gr. v. opii gr.* ij. *æris ust.* ℈iv *Decoct. fœnugrec.* ℥j *misce.* Or instead of *Decoct. fœnugrec.* mix it with fresh *auxung. porcin. in aq; Ros. Rot.* &c.

CHAP. XVII.

Of a Fiſtula *in the Breaſt.*

Q. *HOW' does a* Fiſtula Thoracis *happen?*

A. By a penetrating Wound of the Breaſt, or from a *Phlegmon* poſſeſſing the *Pleura* and *intercoſtal Muſcles.*

Q. *What are the Signs of a* Fiſtula Thoracis?

A. They are *obvious* to every Eye; it is therefore needleſs to give any.

Q. *What are then the Differences of theſe* Fiſtula's?

A. Thoſe which follow a Wound have but one Orifice, and that according to the penetration of the Wound; but that which enſues an Impoſtume, has commonly more Orifices than one, ſome of which paſs *directly* and ſome *curved.*

Q. *Give the Prognoſticks.*

A. All *Fiſtulæ*'s of the Breaſt are of difficult *Cure.*

Q. *Why ſo?*

A. (1.) Becauſe the Breaſt is in continual Motion. (2.) In theſe *Fiſtula*'s the *Pleura* is commonly ulcerate, which hardly admits of Cure. (3.) It often corrupts a Rib. (4) The End of it is commonly lower than its Orifice, which prevents expulſion of *Quittor.* (5.) Great Caution is to be uſed in the Application of Medicines, in this Caſe more than in other Parts. (6.) Becauſe *Fiſtula*'s here waſte the Body, and produce *hectick Feavers*; which if once formed, are ſcarce ever curable, joyn'd with a *Fiſtula* of the Breaſt.

Q. *How is it to be cured, if curable?*

A. By

A. By a convenient Diet, pectoral Decoctions, and fit Applications.

Q. *What is to be preſcribed?*

A. Such as is order'd in the general Cure of *Ulcers*?

Q. *Of what are your pectoral Decoctions compounded?*

A. *Ex flor. & fol. tuſſilag. Capil. Veneris, marrub. alb. ſymphit. tormentil. Biſtort. flor. violar. & Borag. Rad. Enulæ, fol. hyſop. flor. & Rad. Malvar. Rad. petroſelin. fœnicul. Liquorit. Scabious, Valerian, Sarſaparilla, China, Guaicum, Uvar. paſſ. fic. pinguid.* &c. Of theſe, Drinks are to be made, and drank in large *Quantities*, at leaſt two *Quarts* in a Day. But that you may have a certain Preſcription to depend upon, take this following, which has done Wonders in this Caſe, and will effect a Cure, if the Patient is curable, (*viz.*) ℞ *Rad. Liquorit.* ℥iiij *Raſ. C. C.* ℥ij *Raſ. Ebrois* ℥j *Sant. Citri* ℥ij *lign. Saſſafr. & Sarſaparilla, ana* ℥ij *Capil. Veneris, ling. Cervin. Hæder. tereſtr. Tuſſilag. Egrimon. ana* Miij *Coq; omn. in Cong. vj. Aq; Font. ad Cong. iv. cum Uv. paſſ. Exacinat.* ℔j *Mel. Anglican.* ℔viij. Boil, Strain, and Ferment with Yeſt, (like Ale) and when it is almoſt fermented enough, hang it (in a Bag) *Nuc. Moſc. contus* N° iij. *Fol. roriſmar. Sicc.* Mj. keep it a Week, and then drink it for common Drink, for 4 or 6 Weeks. If a *Feaver* attends, uſe the *Cortex* alſo; and if it be very high, make the Drink with half Honey, and half Sugar.

Q. *You ſay, that one Reaſon why a* Fiſtula of the Breaſt *is of difficult Cure, is, becauſe the Ending of the* Fiſtula *is lower than the external Orifice; pray tell me how this is to be remedied?*

A. By Inciſion; in which two things are to be conſidered; firſt, the Place; and, ſecondly, the Care to be uſed in the Operation.

Q. *What*

Q. *What Place is beſt?*

A. The left Side rather than the right, for fear of wounding the Liver, or the *Diaphragma*, which it beareth up; and as for the particular Part, let it be about the beginning of the next Rib, above which the Orifice of the *Fiſtula* ſhews it ſelf.

Q. *How is it done?*

A. Divide the Skin towards the upper Part of the lower Rib, then make way throughout the *intercoſtal Muſcles*, and dry all with a Sponge, and put in a Sponge-tent; and if you paſs no further than the Diviſion of the *Pleura*, you are ſafe.

Q. *But what are the Signs of an* hectick Feaver?

A. If it be confirmed, the Eyes grow hollow, the Colour of the Skin decays, the Skin of the Forehead ſeems dry and ſtretched out, the Eyelids are heavy, the Cavity of the Breaſt ſeems as hollow as if it was without *Viſcera*, and the Body is a mere Skeleton: Theſe are true Signs of a *hectick Feaver* or a *dry Maraſmus*.

Q. *But if ſuch a one comes to you, and implores your Help, and you tell him his Danger, and that you believe him paſt Recovery, yet he ſtill deſires you to do what you can, what is the Method you would uſe,* to make his Life eaſie?

A. I would inject into the *Fiſtula*, *Aq; Plantag.* in which *fol. Roſ. Rub.* have been boiled, and cover my Tent with *Diapalma*; I would order him Broths of *Mutton*, *Veal*, *Chicken*, &c. wherein had been boiled *French-Barley*, *Mallows*, *Raiſins*, *Marigold-flowers*, *Cowſlip-flowers*, *Coltsfoot-flowers*, &c. Alſo give him *Jellies*, *Almond-milk*, *Goats-milk*, or *Aſſes-milk*, *Calves Feet ſtewed*, *poached Eggs*, *and freſh ſweet Butter*; and if by this Method he gathers any Strength, be not out of hope, and encourage the Patient.

Q. *But*

Q. *But what are your local Medicines in* Fiſtula's *here without a* hectick Feaver ?

A. The Method here differs but little from the general Method : *Dilate* with the *Fiſtula*-Tent and Sponge ; but in removing the *Callus*, take care that the *Trochisk* do not reach to the Cavity of the Breaſt, but rather apply a Tent arm'd with *Populeon*, wherein ſome *Fiſtula-powder has been mingled* ; and when the *Callus* is removed, mundifie with *Aq; Calcis*, and *Mel. Roſar.* (but take heed of injecting any *bitter* Medicine.) This being done, proceed, and conſolidate with an Injection of *Aq; Plantag. & Syr. E. Roſ. Sicc.* Then wet a Pledget in *this Syrup*, and lay over the Orifice, and an Emplaiſter *ex Paracelſ.* over all, *&c.*

CHAP. XVIII.

Of a Fiſtula *in the Belly.*

Q. *WHat Parts do you include, when you ſpeak of a* Fiſtula *in the Belly* ?

A. I underſtand and include the *inguinal Parts*, and *in Ano.*

Q *From whence do* Fiſtula's *in the Groin proceed* ?

A. Either from *Venereal Buboes*, neglected or ill-cured, or from *Plethora* and *Cachochimia*, the Matter not coming to the *Emunctories* themſelves, which receive the Excrements of the Liver, but hinder'd either thro' Weakneſs of the *expulſive Faculty*, or by the croſſing of the *Muſcles.*

Q. *What Preſages can you make in this Caſe* ?

A. Fiſtula's in theſe Places, which paſs to the Cavity of the *Abdomen*, are very hardly cured ; and if the Guts are eroded, and the Excrements come forth,

forth, 'tis much odds but Death puts an end to the Controverſie ; tho' ſuch Things have by chance been cured, and therefore Men are not to be left to periſh without help.

And if there is any belief in Man, by the Dyet-drink in the foregoing Chapter, Mr. *P.* a very ſenſible ingenious Surgeon, and an honeſt ſober Man, now living at *Layſtoff* in *Suffolk*, (from whom I firſt had the Preſcription) told me, That a Woman, who by reaſon of a *Tumor* on the *Abdomen* had a Mortification of the Inteſtines, with loſs of Subſtance there, whereby the Excrements came continually out ; and altho' all hopes of Life were gone, was perfectly cured (as it were Miraculouſly) by the internal uſe (*alone*) of that Drink, with fit external Applications ; And, *what has been, may be* ; therefore never deſpair, ſo long as there is Life ; and ſuch a Cure will never want Applauſe, nor fail of Reputation as well as Reward.

Q. *How are theſe* Fiſtula's *to be cured ?*

A. If they run along ſuperficially, the beſt way is to lay them open, and then the *Fiſtula* Powder to be applied, and follow the Method already laid down, in order to finiſh the Cure.

Q. *Tho' you can promiſe no Cure, if the* Spine *be foul, yet ſomething muſt be done, as long as there is Life ; pray how will you dreſs ſuch a Patient ?*

A. Only uſe ſuch an Injection as this of *Aq; Plantag. Syr. Roſ. ſicc. tinct. Myrrhæ*, &c. with a Plaiſter *ex Paracelſ.* &c. over all.

Q. *But ſuppoſe the Guts are perforated, and the Excrements come forth ?*

A. Let the Patient's Diet be Sheeps and Calves-Heads and Feet ſtewed ; alſo Rice boiled in Milk wherein Steel has been often quenched ; alſo a Glaſs of red Wine with a Toaſt, and uſe the

Dyet-

Dyet-drink aforesaid, and keep the Orifice open with a Sponge-tent, till the Gut be healed. Dissolve a little *Allum. Roch. in Vin. Rubr.* and add *Syr. Myrtillor.* and make an Injection; and for the rest of the Cure, do as has been directed.

Q. *From whence proceeds a* Fistula *in Ano?*

A. Most commonly from a *Phlegmon* there, broke, and ill-cured.

Q. *What are the Differences of* Fistulæ in Ano?

A. Some penetrate the *intestinum Rectum*, and some do not; and both these again, are either superficial or deep.

Q. *How will you know whether it has pierced the* intestinum Rectum, *or not?*

A. By these Signs: (1.) If upon breaking Wind part of it makes way thro' the *Sinus.* (2.) If the Excrements appear mingled with the *Quittor*, (3.) If an Injection passes quite thro'. (4.) By the Finger and Probe.

Q. *What Prognosticks have you in this Cure?*

A. No *Fistula in Ano* is easie of Cure.

Q. *Why?*

A. Because this Part is the *Sink* of the whole Body, and affords great quantity of *Filth* and superfluous Humidity, which hinders the Cure.

Q. *How will you proceed in the Cure?*

A. It is to be effected, (1.) By convenient Diet. (2.) By inward Medicines. (3. By Incision or Deligation: And, (4.) By proper Medicines.

Q. *What Diet and internal Medicines are best?*

A. That which I have already directed.

Q. *When is Incision or Deligation to be attempted?*

A. When the *Fistula* is superficial, and not else.

Q. *How is Incision to be made?*

A. If the *Fistula* does not pass to the *intestinum Rectum*, after you have enlarged it and removed the *Callosity*, lay it open by a Snip of your Probe-Scissors,

Sciſſors, and by Dorſells keep the Lips aſunder; then Digeſt, Mundifie, Incarn, *&c.* as has been directed; and be ſure to take care, that ſound good Fleſh be generated in the Bottom, before you endeavour to unite the Brims.

Q. *But ſuppoſe it to go deep inwardly, and you cannot come to make* Inciſion *?*

A. Then dilate the *Fiſtula* with the *Fiſtula* or Sponge-tent, and remove the *Callus* with the *Trochis* aforeſaid; which being come out, and the *Callus* quite gone, cleanſe with *Mel. Roſ. & Aq; Calcis*; then conſolidate and ſiccatrize, as has been taught; and remember daily to ſhorten your Tents, till the *Sinus* is quite fill'd up, which you ſhall know by the Goodneſs and ſmall Quantity of the Matter it yields: But if the *Fiſtula* reach into the *inteſtinum Rectum*, then cutting aſunder the whole length of the *Sinus* by Deligation, is the beſt way to cure it.

Q. *How is that performed?*

A. Firſt dilate the *Sinus*, and remove the *Callus*, as has been taught, and then take a ſtrong Thread of *Silk*, or *Hemp unwhitened*, and put one End of it into the Eye of a ſmall Probe or Needle, of Lead, or Silver, or other thing that will bend; then put the Eye with the Thread thro' the *Sinus* to the *inteſtinum Rectum*; then put your Fore-Finger into the *Anus*, and pull the Thread and Probe out of the *Anus*; then make good Deligation, tying the Ends of the Silk with a running Knot, that it may be the more eaſily looſen'd; and ſo more and more draw in the Ends of the Thread at every dreſſing, if it may be permitted: And when the *Sinus*, by this way, is wholly divided, proceed in the Cure, as has been taught; but remember to put under the Knot a ſmall Boulſter of Linnen; which will be for the great Eaſe of the Patient; and without it the Ligature will not be tolerable.

CHAP.

CHAP XIX.

Of an Herpes Exedens.

Q. *What is an* Herpes?

A. It hath its Name a *Serpendo*, from its creeping quality. There are three Species of it: (1.) A *Simple Herpes*, and is a Puſtule of a yellowiſh inflamed Colour, with a ſharp Head; in the Face they appear Single, and in other Parts *ſometimes*, and are generally called Cholerick Puſtules. When they overſpread the Back, Sides or Breaſt, they are accompanied with an *Eryſipelas*, and are then called *Shingles*. (2.) *Herpes Miliaris*; this ariſeth in a Cluſter of ſmall Wheals, not much differing from the Colour of the Skin; they itch; and being ſcratched, they weep a thin Water, which drying, a Scab appears at the Head of each Wheal, in the form of Millet-Seed, from whence it hath its Name. (3.) *Herpes Exedens*; this riſeth in the Skin, in a ſmall Tubercle, on the Top of which appears an *Ulcer* like a *Pin-hole*, which in time grows broad, uneven, and ſometimes livid, and will heal in the middle, whilſt the Brims continue ſore.

Q. *What is required in the Cure of an* Herpes Exedens?

A. (1.) The Humour which flows to the Part is to be ſtay'd. (2.) The Humour already in the Part muſt be evacuated. (3.) Convenient Applications to cure the *Ulcer* it ſelf.

Q. *How is the firſt performed?*

A. By purging the Body well from *thick Choler* and *Bilis atra*, (if the *Ulcer* is of a livid Colour) with

with *Elect. linitiv. pulv. sanct. Rhab. Senn. Polipod. Hermodact.* &c.

Q. *How is the second performed?*

A. By mixing ℥j *precipit. Rub.* washed in Rose-water with *Unguent. Popul.* or *Mundificativum Paracelsi* ℥j.

Q. *How long is this Medicine to be used?*

A. Till the *Ulcer* spread no more, and look red.

Q. *How is the third Intention performed, which is to cure the* Ulcer *it self?*

A. Give inwardly a Decoction of *Sarsaparilla, China, Guaicum,* &c. and if you perceive the Brims of the *Ulcer* to *erode,* further and further, touch them with *Ol. Vitrioli,* or *Ol. Sulph.* then endeavour to fill up the Cavity by Medicines which strongly dry (yet are not corosive;) as *Ceruss. & Tutiæ preparat. Cort. pin. cum Unguent. Nicotian, & Liniment. arcei,* &c. Or ℞ *Unguent. Enulat. cum Mercur.* ℥j *Flo. Sulphur.* ℥j *misce,* which is commended by some; and then siccatrize with *Unguent. Desicc. Rub.* &c. A Simple *Herpes* is cured much like an *Erysipelas,* by Evacuation and Contemperation of Choler; and *Herpes Miliaris* is to be treated much like the Itch, with Catharticks and Alterants. As for local Medicines in a Simple *Herpes, Succ. polygoni Equiset. Plantag. lithary auri. Ceruss. ol. ros. Unguent. alb. Diapomphol. nutrit. popul.* &c. but *Herpes Miliaris* requires more powerful *Exsiccants,* and even *Mercurials;* which may be seen at large in *Wiseman,* in the Chapter of *Herpes,* &c.

CHAP.

CHAP. XX.

Of Phagedœna & Nome.

Q. *What is a* Phagedœnic Ulcer?

A. It is a deep *Ulcer* with tumify'd Lips, corroding the adjacent Parts, produced of *a bilious Humor*, inclin'd to Melancholy, not so thick as that which is the Cause of *Cancers*, nor so thin as that which causes an *Erysipelas* or *Herpes*.

Q. *Why is it called* Phagedœnic?

A. Φαγέδαινα is a Greek Name, derived from Φάγω; (in Latin *Edo*) to eat; so that a *Phagedœnic Ulcer*, is *Ulcus Exedens*, or an Eating *Ulcer*.

Q. *What is a* Nome?

A. Νομὴ, or *Ulcus depascens*; in English, is a feeding consuming *Ulcer*, without any *Tumor* in the Brims, but indued with Malignity and Putrefaction, and Corruption of the Part.

Q. *How are these* Ulcers *to be cured*?

A. Let the Diet be such as affords a good Juice, and is of easie Digestion, and make a reasonable Evacuation by *Cathartick*s; and keep them to a Diet-drink of *Sarsa*, &c. joyn'd with some vulnerary Herbs. Dress the tumified Brims of the *Phagedœnic Ulcer* with *Unguent. Alb.* and *Popul.* mix'd; and the *Ulcer* it self with *Unguent. Nicotian* ℥j *Mercur. precipitat. Rub.* ℥ij *misce.* But as for *Nome*, or *Ulcus depascens*, it requires stronger Medicines than *Phagedœna*; as *Vitr. Alb. Croc. Mart. Calc. viv. Allum ust. Plumb. ust. Æris ust.* &c.

Q. *How long are these Medicines to be used*?

A. Till the *Erosion* stops, and the *Ulcers* look clean and red, then incarn and siccatrize, as has been taught.

CHAP. XXI.

Of a Cancer, *and a Cancerous* Ulcer.

Q. *What is a* Cancerous Tumor?

A. It is a *Tumor* proceeding (as Authors say) of *Bilis atra*, hard, unequal, of a leaden Colour, hot, painful, having full Veins appearing in the Parts adjoyning, which imitate the Feet of a Crab, from whence it receives its Name.

Q. *What is the Cause of this* Ulcer?

A. A very hot Distemperature of the Liver, or Spleen, ill Diet, bad Wines, a hot Air, and sometimes a violent external Force, *&c.*

Q. *What Parts doth it mostly* invade?

A. Altho' it is possible for it to breed in all Parts of the Body, yet it generally seizes either the *Breasts* or *Matrix* of Women, and the Lips and Nose of the Face.

Q. *Why does it rather seize those Parts than others?*

A. The Breasts more readily receive this Humour, because of their loose and *glandulous* Substance; and a long retention of the *Menstrua*, (whereby the Blood is, as it were, burned) is the reason of its seizing the Matrix.

Q. *What Prognosticks are to be made in this Case?*

A. (1) No Cancer is of easie Cure. (2.) When it is come to a remarkable bigness, it is to be extirpated. (3.) If the Patient be weak, and the *Tumor* very stubborn, (and more especially if it adhere to the Ribs,) tamper not with it, but content your self with *Lenients*; for if you use either *Knife* or *Cautery* to such, you hasten their end.

(4)

(4) Never be too large in your Promiſes of the Cure, where Extirpation cannot be made, eſpecially if it be ulcerate.

Q. *What is your dietetick Method in the Cure?*

A. Let them forbear all ſtrong Wines, Cabbage, Cheeſe, and ſalt Fleſh or Fiſh; as alſo all Things that thicken the Blood, and inflame the Humors; let their Diet be cooling and moiſtening; Violet-leaves, Spinage, Purſlain, Sorrel, boiled; alſo Mutton, Veal, Lamb, Pullets, poached Eggs, and Fiſhes that ſwim in clear Rivers; and let their Drink be a ſmall Ale, *&c.*

Q. *What is your* pharmaceutick *Means?*

A. Bleed in the Arm if it be in the Breaſt; and in the *Saphena* if it be in the Matrix; and let it be done at the *full Moon*; alſo give *Elect. Lenitiv.* in Whey, or *Rhab. ſen. pulv. ſanctus*, &c. once a Week.

Q. *What is the* Chirurgical *or* Topical *Method?*

A. In a Cancer there is a *double Poiſon*, a *Putrefactive* and *Corroſive*: Now, if you uſe ſuch Medicines as ſuppurate other *Tumors*, you will bring Putrefaction; and, if you apply *Corroſives*, you aſſiſt the Poiſon, and encreaſe the Malady.

Q. *What are then beſt?*

A. Thoſe which *repel and digeſt*; but ſhun all Emplaiſters, for they pen up the Humour by ſhutting the Pores: You may uſe *Succ. nigel. Unguent. popul. farin. Lupinor. Secale. Succ. ſymphit. Equiſet. plantag. Millifol. tapſus barbat.* &c. made into Cataplaſms. Alſo *Limac & ſucc. heder. terreſt.* is accounted a good Cataplaſm; but if the *Tumor* be very painful, apply *Rad. Cicut. farin. ſecal. & ol. Mirtilor.* mixt into a Cataplaſm. Alſo ℞ *Ol Cidonior* ℥iv *acet Sambuc.* ℥ij, and mix them well in a *leaden Mortar*; with either of which dreſs the *Tumor* twice a Day: But ſome uſe only a *Plate*

of Lead, rubb'd over with *Argent. viv.* and ſo apply it to the Part. And thus far of a *cancerous Tumour* not ulcerate.

Q. *What is a* cancerous Ulcer ?

A. It is known by theſe Signs, (*viz.*) Thick Lips, a ſtinking Smell, the Lips are turned outward, greeniſh and fretted, yielding a *Sanies* of a black or dark yellow Colour, and is extreamly painful.

Q. *What Differences are there found, in theſe* Ulcers ?

A. Two ; (*viz.*) *Lupus*, and *Noli me tangere* ; the former is in the Thigh or Leg, and the latter in the Face; but in any other part of the Body it carries its own proper Name of a *Cancer* only.

Q. *What Method muſt be uſed in the Cure ?*

A. The ſame that was preſcribed in a *cancerous Tumor*, (as to Phlebotomy, Diet, and Purging). To the *Ulcer* apply Cloths wet in *Succ. Solan. vel Nicotian. Angl.* or in *Aq; Sperm. Ranar.* in which is diſſolv'd *Succ. Saturnis* ; eſpecially if the Cancer be not ulcerate. Alſo *Plumb. uſt. & lot. tutiæ, Ol. Roſ. Ceræ, ſucc. Solan.* &c. beat up in a leaden Mortar, to the Conſiſtence of an Unguent, and applied, *&c.*

Q. *Will theſe Medicines ſerve in all* cancerous Ulcers *without diſtinction ?*

A No ; they only ſerve to alay the raging Pain *in large and deep Cancers*, and to put a ſtop to their encreaſe ; but if it be only ſuperficial, it may be eat out with *ſublimed Arſenick*, as ſome Men have taught : But this is a very dangerous Attempt ; and we never met with any ſuch Application that ſucceeded, and ſhall hardly ever make the Experiment.

Q. *But ſuppoſe this Grief happens in the* Matrix ?

A. Then

A. Then uſe this Medicament, ℞ *Stercor. bubul.* ℔iv *herb. Rob. plantag. ſemperviv. hyoſciam, portulac. lactuc. ana Mj Canc. fluv.* N°. xij. *Contund. omnia; & diſtil. in alemb. plumb. Imbuet. Camphora, & Injiciatur frequent.*

Q. *How is a* Noli me tangere *cured?*

A. ℞ *Vitriol.* ℔iſs *auripigment. ſulph. viv. ana* ℥iv *ſal. gem.* ℥iij *cum aceto fiat paſta in olla terrea probè lutata, ſiccetur in furno.* This, by divers Applications, will conſume this, and other Cancers: And then digeſt, deterge, and incarn, and then ſiccatrize with this, ℞ *Mel Diſpumat.* ℥ij *Sevi. Hercin. limat. Chalib. ana* ℥iſs *litharg. aur.* ℥ij *miſce.*

Q. *But if, notwithſtanding all your Endeavours, it ſtill increaſes, what muſt be done?*

A. Warn the Patient of the preſent Danger, and propoſe *Extirpation.*

Q. *What ought to be look'd to, in order to have it ſucceed well?*

A. (1.) That the Patient be ſtrong, and of a good Habit, and not too cold, nor the *Menſtrua* ceaſed. (2.) That the Cancer be looſe, and the *Axilla* free from *painful Glands.* (3.) That it be extirpated in the *Spring* or *Autumn*, &c.

Q. *How is it to be performed?*

A. Let the Patient be placed in a clear Light, and held ſteady, and dexterouſly paſs two Needles made for that purpoſe, thro' the Breaſt croſs-ways, over which paſs Tape from one to 'tother, for hold for your Fingers; by which pull it to you with one Hand, and, with the other, nimbly make Inciſion, and cut it off as cloſe to the Ribs as poſſible, that no Parts of it remain behind: But if any *cancerous Gland* ſhould remain, be ſure to have actual Cauteries of different ſizes ready hot by you, to conſume it, and to ſtop the Bleeding; or otherwiſe apply, for reſtraining the He-

morrhage, Dorſels dipp'd in ſcalding-hot *Ol. Terebinth. per ſe*; or Buttons dipp'd in the ſame; firſt arm'd with the common Reſtrictive, and ſo laid to the Mouths of the Arteries; and over all, Pledgets armed with the ſame; then after good Boulſtring and Rolling, conveniently place the Patient in Bed, and at Night give her an *anodine Draught*. But the moſt certain and decent way is, to make Ligature on the Ends of the Arteries, and then you are ſafe from a Hemorrhage, beyond all diſpute. Then the ſecond or third Day open it, digeſt, deterge, incarn and ſiccatrize, as in other Amputations; keep the Body ſoluble, and take care to prevent a Feaver: Alſo now make one or more Fontanels; for if any evil Quality remains in the Humors, the Ulcer will hardly ſiccatrize?

Q. *But if notwithſtanding, the Lips do grow* callous, *what will you do?*

A. Then timely attempt their Eradication, by actual Cautery, leſt you repent it when it is too late.

Q. *But is there no other Way, but this frightful one?*

A. Some pretend to do it by Cauſticks, but it is ſo often to be repeated, before it can have its Effect, that the Remedy proves worſe than the Diſeaſe.

CHAP.

CHAP. XXII.

Of a Diſcolour'd, and Varicous Ulcer.

Q. *WHat are the unnatural Colours which poſſeſs an* Ulcer ?

A. They are in number four; (*viz.*) Red, Yellow, Livid, and Black.

Q. *What is the Cauſe of theſe ?*

A. Either Blood offending in quantity or quality, or too hot, or from too hard Bandage, or by Surfeiting, by ſolemn Evacuations ſuppreſs'd, and by Things apply'd too cooling, *&c.*

Q. *How will you remove the red Colour ?*

A. The Diet muſt be cooling and moiſtening, let his Rollers be dipped in *Accet. Roſar.* and *Aq; Font.* and not rolled too ſlack; avoid violent Motion, provoke natural Purgation, if ſuppreſs'd: Blood is to be drawn, if it abound, and the Part is to be ſcarrified, *&c.*

Q. *How is the livid Colour to be removed ?*

A. If it proceed from Cold, which you may eaſily perceive, make uſe of ſuch Medicines as are able to reduce the Part to its natural Heat, made *Ex Rad. Rapi, Raphani, Pulv. Carioph. Ol Lini Vet. q. ſ. & fiat. Cataplaſm.* and, if need be, uſe Scarrifications, Cupping-glaſſes, *&c.*

Q. *How is the black Colour to be removed ?*

A. Scarrifie the Parts deep, and foment them well, and treat it as the beginning of a *Mortification*; and if either of theſe Accidents happen to an *Ulcer*, let them be treated as here directed, till the Part comes to its natural Colour; and then go forward, as has been taught in the Cure of Compound *Ulcers.*

Q. *What is a* Varix ?

A. It is a Dilatation of a Vein, cauſing a Tumifaction of it, with Windings and *Tortuoſity*, ariſing in ſome part of the Body.

Q. *Why is it called a* Varix ?

A. From the likeneſs it bears to the *Protuberances*, which are ſeen in *Trees* above the *Bark*, called *Varices*.

Q. *Whence are they cauſed* ?

A. Either from Blood impregnated with Spirits, or from Melancholy Blood, or thro' exceſs of Labour, or immoderate Exerciſe.

Q. *How are they to be cured* ?

A. By diſcharging the Body of the offending Humors, and by manual Operation ; ſhun groſs Meats ; open a Vein, and give Lenitives, mixed with ſuch as purge groſs Humors, as *Lenitiv. Elect. Pulv. Sanct.* &c.

Q. *How is their Chirurgical Cure performed* ?

A. By *Uſtion*, by *Exciſion*, and by *taking up the Vein.*

Q. *How are theſe done* ?

A. As to the firſt two, they are ſo painful and terrible, that ſcarcely any Man would undergo the Operation ; therefore I ſhall ſpeak nothing of them ; but as for taking up the Vein, it is thus done, Take up the *Varix*, both above and below, in both which Places make Deligation, and open the Vein between them, that the Blood may be diſcharged out of it, *&c.*

CHAP.

CHAP XXIII.

Of Ulcers *of the hairy Scalp.*

Q. *What is* Achor?

A. It is an ulcerous Tumor of the Skin of the Head, red and *Dug-like*, having very ſmall Holes, from whence proceeds a thin *Sanies*.

Q. *What is* Favus?

A. It is the ſame, yet wherein the Holes are larger, and which contains *an Humour reſembling Honey*, from whence it is denominated.

Q. *From whence is it cauſed?*

A. The *primitive Cauſes* are, corrupt Nouriſhment and Contagion, and by *Contact* and frequent Converſation; the *material* Cauſe, is a ſharp, fretting, viſcous Humor; and the *conjunct* Cauſe, is the ſame Humor *impacted* in the Skin of the Head

Q. *What are the Signs?*

A. In both *Achor* and *Favus*, there is an itching and a Tumor with Holes, and tho' often both are attended with Lice, yet it is proper for *Favus* to have Scales.

Q. *What are your Prognoſticks?*

A. If they continue long, they leave behind them a Baldneſs of the Part; but thoſe Children who have it, are freed from the falling Sickneſs; and if it be *hereditary*, it is very hardly cured at all.

Q. *What are the Means of Cure?*

A. A convenient Diet, Phlebotomy, Purgation, and proper Applications to the *Ulcers*?

Q. *What*

Q. *What Diet is moſt proper?*

A. It muſt be cooling, moiſtening, and affording a laudable Juice; but all ſtrong, ſweet Wines, ſharp ſalt Meats, hard Eggs, Fiſhes living in muddy Water, and Purſlain, are to be ſhunn'd: As for Phlebotomy, it muſt be preſcribed and repeated; if there is a *Plethora*, or if much corrupt Blood is ſettled in the Veſſels of the Head, purge with *Confect. Hamech. Syr. Roſ. Solut. cum Agarico, Pulv. Sanct. Troch. Alhandal*, &c. Purge with ſome of theſe once a Week: Alſo *Sternutories* may be uſed, if it be thought neceſſary.

Q. *What are proper external Applications?*

A. They muſt be ſuch as are aſtringent and repelling, which we diſcourſed of in the Doctrine of Tumors. *Butyr. Recent. auxung. porcin. Sulph. viv. helleb. alb. & nigr. Calc. viv. Merc. crud. litharg. gallar. allum. acet. ol. vet. pic. liquid* &c. Pull out the Hairs, then foment with a Decoction of *Vin. Rub. Cort. granat. Bacc. Mirtillor. fol. Roſ. Rub.* &c. and then apply your Unguents.

Q. *Are theſe Medicines to be uſed indifferently to all?*

A. No: but to Children apply the milder ſort; and in all, proportion Things according to Art.

Q. *But ſuppoſe the* Ulcers *be very moiſt, and apt to be inflamed by the Application of unctuous Medicines?*

A. Then, inſtead of *Auxung.* or *Butyr. Rec.* make up your Medicines with *Oximel ſimplex*, and abſterſive Powders, and *farin. Hordei*, and over them a *Cap of Ivy-leaves* ſewed together.

Q. *What is that Ulcer of the Head which is called* Tinea?

A. It is a cruſty fretting Ulcer of the Skin of the Head, without very much Moiſture, corrupting

ing the Roots of the Hair, and ſending from the Skin a dry ſtinking Filth, which is commonly called *a ſcall'd Head.*

Q. *From whence is it cauſed?*

A. Either from Things not natural, or corrupt Milk, or Contagion, or elſe is hereditary.

Q. *What are the Signs of this Diſeaſe?*

A. It is known by its dry cruſty Scales, which are ſometimes yellow, ſometimes Aſh-colour'd, or greeniſh, but moſt commonly white, and never altogether black.

Q. *What are the Preſages of the Diſeaſe?*

A. (1.) It is very hard of Cure. (2) If the Skin be hard, and many Scales appear, and the Hair falls away, it is of moſt difficult Cure. (3.) When it is cured, it often leaves behind it Baldneſs. (4.) The older they are, the harder of cure.

Q. *What Indications offer themſelves in the Cure?*

A. (1.) To remove the Cauſe: And, (2) to cure the Ulcer by *proper Means*: The firſt is done by rightly ordering the Non-naturals, by *Cathartick*s and *Phlebotomy*, as was directed in *Achor* and *Favus*, only remember to add *mercurial Preparations to your Cathartick*s, and repeat *Phlebotomy* at leaſt once a Quarter, or oftener if it be neceſſary.

Q. *How is the Ulcer to be cured?*

A. Take care to avoid meddling with tender Children, until they are able to bear ſharp Medicines; but in the interim, that ſomething may be done, you may apply to the Part, a Liniment *ex ol. over. Croc. martis & C. C. C.* and lay over it a Cap of Ivy-leaves; but apply no Repercuſſives, for the Humor is ſo thick that it cannot be repell'd.

Q. *How will you proceed?*

A. Firſt,

A. First, Procure the Separation of the Scale: secondly, Pull out the Hairs by the Roots; and, thirdly, Heal the Ulcer.

Q. *How will you cauſe the Scales to fall off?*

A. By Unguents made of *Ol. ex ped bov.* and Mucilages *ex Rad. Altheæ, ſem. Lini & Fenugr.* &c. And I have known where, green Ellicampane-Roots, boiled tender, pith'd and pulped through a Sieve, and mixed with a fourth part of Hogs-Lard, has been uſed with great Succeſs; being daily anointed on the Part.

Q. *How will you then cure the Ulcers?*

A. Either with *Unguent. Enulat. cum Merc.* and over it *Empl. de Rains cum Merc.* Or, ℞ *Succ. fumar. Oxilapath. acet. ana* ℥iv *ol. vet.* ℔j *Coq; omn. Ad ſucc. Conſump. & adde pulv. ſequent.* ℞ *Helleb. alb. & nigr. Sulph. viv. calc. viv. allum. gallar. ana* ℥ſs *virid. Æris* ℥ij *pic. liquid.* ℥iſs *Ceræ. q. ſ. fiat Ceratum*, and apply it. And, while this is doing, Purge once a Week; which is all we need diſcourſe of, with relation to this Diſtemper.

CHAP.

CHAP. XXIV.

Of Ulcers *of the Ears.*

Q. *What is the Cauſe of Ulcers in the Ears?*

A. A Blow, a Fall, or a ſharp Humor ſent from the Brain.

Q. *What are the Prognoſticks in this Caſe?*

A. (1) If the Cure be neglected, Deafneſs enſues. (2.) If greater Plenty of Matter comes forth than it is reaſonable to ſuppoſe the Ears can produce, then you may be ſure, that the greateſt part of it comes from the Brain. (3.) If before the Matter comes out, the Patient feels great Pain and Pulſation, it certainly proceeds from a *Phlegmon* bred there.

Q. *How will you proceed in the Cure?*

A. Before any thing be applied, purge the Head with *Pil. Coch. maj.* or *Pil. de Agregativ. Diagrid.* &c. (2.) Let the Applications be neither too hot, nor too cold. (3.) Let them be all liquid. (4.) After dreſſing, let the Patient for ſome time lye upon the well Side, the diſeaſed Ear being ſtopped with Wooll. (5) Avoid all oily and fat Medicines.

Q. *What local Medicines will you uſe?*

A. Crocus Martis boil'd ſtrongly in Aceto: Alſo *fol. Alchimil. ſigil. Solomon. Plantag. Equiſet. &c.* boiled and made into a Syrup, which will be the better by adding *Cort. & Flor. Granat. Sumach. Bacc. Mirtillor. & fol Roſ. Rub.*

Q. *How will you know if the Ulcer have Worms in it?*

A. By

A. By their Motion they will cauſe intolerable Itching.

Q. *What will you dreſs with in ſuch a Caſe?*

A. With a ſtrong Decoction, *Ex Cereviſ. non lupulat. & fol. Nicotian.*

Q. *What muſt be done if a* Fungus *riſes, and fills up the Cavity of the Ear?*

A. (1.) Purge the Head. (2.) Conſume the *Fungus* by a careful Application of *Realgar. alb. Auripigment. & Calc. viv. ana p. æ.* (3.) Inject into the Ear, *Vin. alb. Mel. Roſar. & Ægiptiac.* (4.) To heal it, inject ſome vulnerary Syrup in *Aq; Plantag.* or *Roſ. Rub.*

CHAP. XXV.

Of an Ophthalmia.

Q. *What is an* Ophthalmia vera?

A. An Inflammation of the *Tunica adnata* of the Eye, attended with Tumor, Pain, Heat, flowing of Tears, the Eye-lid is turned up and ſomewhat ulcerate, *&c.*

Q. *What are its Cauſes?*

A. Either a Blow, a Fall, or ſharp Humors, or Oil, Smoak and Duſt.

Q. *What are the Differences of an* Ophthalmia?

A. They are either Mild or Malignant; the Mild is when only the *Adnata* is inflamed; the Malignant, when it ſeizes it with the other Symptoms before mentioned.

Q. *Why ſhould Oil cauſe this Diſeaſe?*

A. Becauſe it cleaves faſt to the Tunicles, ſtops the Pores, and ſo keeps in the Heat and inflames the Eye; and the Heat, being pent in, burns when

it

it cannot breathe through, and inflames the Humors, and ſo cauſeth an *Ophthalmia*.

Q. *What are the Prognoſticks?*

A. That coming from an external Cauſe, is more eaſily cured than that of an internal one. If a Pain in the Head is joyned with it, and it continue long, Blindneſs may be feared. (3.) If the Humour be thick, it will not continue long. (4.) If the Matter be very much and thin, it is like to continue long.

Q. *What are the Intentions of Cure?*

A. A proper Diet, Phlebotomy, Purgation, *Colliriums*, and a Seton, or Fontanel.

Q. *What particular Rules are to be obſerved?*

A. He muſt be ſparing in Meat and Drink, abſtain from *Venery*, and keep the Body ſoluble; let his Sleep be moderate, and the Room kept dark; let the Objects he looks on be green; if his Hair be on, cut it off; and, if Strength will permit, bleed him; or if not, apply Cupping-glaſſes to his Shoulders; and, *to ſtay the Fluxion*, apply a ſtrong *Defenſative* to the Forehead and Temples.

Q. *Of what Qualities muſt your local Medicines be?*

A. Something aſtringent, cooling and anodine; as, *Aq; Alb. ovi, Mucilag. ſem Cydonior. Fenugrec.* &c. drawn with *Aq; Plant.* Or *Aq; Roſar. cum minim. croc.* Alſo *Troch. alb. Rhaſ. ſine opio, diſſolv. in Aq; Sperm. ran.* Or *Eq; Euphragiæ cum pulv. tutiæ*, &c.

Q. *But ſuppoſe this does not do the Work?*

A. Then apply Cupping-glaſſes, and make a Seton in the Neck, and Purge and Bleed, as has been directed.

Q. *What is the* Tunica adnata?

A. It is the outmoſt Tunicle of the Eye; it ſprings from the *Pericranium*, and is ſpread over all

all the White of the Eye, above the *Sclerotica*, reaching as far as the *Iris*; by which the Eye is kept firmly within its *Orbit*, and from whence it is called *Conjunctiva*: It is of moſt *exquiſite Senſe*, and has many *capilary Veins* and Arteries creeping through it, which appear very plain in an *Ophthalmia*, or Inflammation of this Tunicle.

CHAP. XXVI.

Of the reſt of the Ulcers *of the Eye.*

Q. *WE have ſaid enough with relation to an* Ophthalmia; *inform me now what other Ulcers the Eye is ſubject to? And firſt name the mild ones.*

A. They are in number ſeven, four ſuperficial ones, and three deeper: The firſt is called in Greek ἀχλὺς, *achlys*, in Latin *Caligo*, in Engliſh a *Miſt*; it is a very ſuperficial Ulcer, of a bluiſh colour, paſſing the greateſt part of the Black of the Eye. The ſecond is called νεφέλιον in Greek, in Latin *Nubecula*, in Engliſh a *Cloud*; this is deeper, but narrower and whiter than *Caligo*. The third is called ἄρχμον; it is an Ulcer growing about the *Iris*; poſſeſſing part of the White and part of the Black of the Eye; without the *Iris*, it looks red; and within it, white. The fourth ſuperficial *Ulcer* is called ἐπιφυμα; this makes the *Cornea* rugged, and of an Aſh-colour, reſembling a Lock of Wooll. And now the fifth *Ulcer*, (which is the firſt of the deeper ſort) is called βόθειον in Greek, and *Foſſula* in Latin; it is a hollow, narrow *Ulcer* of the *Cornea* without Filth; it is like a Puncture, or *Dint*. The ſixth is called κοιλωμα; the

the ſame with *Foſſula*, only it is ſomething wider, and not ſo deep. The laſt *Ulcer* of the *Cornea* is called ἔγκαυμα, *inuſtio*; it is an impure and cruſty *Ulcer*, thro' which the Humors of the Eye ſometimes come out, and then it is called *Procidentia*: Of which there are four kinds; as, (1) If it fall out but a very little, it is called *Caput muſcæ*, and *Formicalis*, the Head of a Fly, or Piſmire. (2) If it fall down yet more, and equal a Grape in bigneſs, it is called *Uvea* or *Uvatio*. (3.) If it falls down yet more, and hangs down like a little Apple, it is called *Malum*, or the Apple-like Rupture. (4.) But if it fall down, and grow hard, brawny and flat, it is called *Clavus*, or the Nail-like Rupture.

Q. *How are theſe to be cured?*

A. Theſe four laſt are altogether incurable; only the Apple-like and Grape-like Rupture, if the Roots are ſmall, may by Ligature be taken off, but the Sight is not to be reſtored.

Q. *How will you proceed in the Cure of the reſt?*

A. Proceed as directed in the Cure of an *Ophthalmia*; let your *Catharticks* be gentle, and avoid any thing that may cauſe *Vomiting*; and as to local Medicines in ſuperficial *Ulcers* of the *Cornea*, let them be ſuch as theſe: *Succ. Rutæ, Chelidon, Euphrag. Sacc. Cand. Alloes, Sarcocol, fel. Capon. Croc. Metallor. Camphor. Tutia*, &c. But if the *Ulcers* be of the deeper ſort, then uſe ſuch as theſe: *Plumb. Uſt. Antimon. æris Uſt. Gum Arabic. Croc. Angl Opium, in Aq; Roſ. vel Plant.* &c. And dreſs the *Ulcer* four times a Day, and purge once a Week; and a right uſe of the Non-naturals muſt be injoined. Let the Drink be Small-Beer, the Food of the eaſie digeſtion; avoid Baked and Fried Meats, and all ſtrong Spices, Muſtard, Garlick, Onions, Peaſe and Beans; and, inſtead of com-

mon Salt to your Meat, uſe this, ℞ *Flor. Euphrag. ſem Fœnicul. ana* ℥j *Cinam. & Mac. ana* ℈j *Sal Com.* ℥j *miſce fiat pulvis.*

Q. *What* Ulcers *of the Eye do you call Malignant?*

A. They are in number five, three contagious, and two not contagious, (*viz.*) *Carbunculoſa, Venerea, Morbilloſa, Nome*, and *Cancroſa*; the *Nome* ſometimes begins at the Corner of the Eye, ſometimes at the White, and ſometimes at the *Cornea*; this *Ulcer* is dangerous, and ſeldom cured without loſs of Sight. *Ulcus Cancroſus*, has a thin darkiſh Humor proceeding from it, is very painful, and incurable; all that can be done, is to give the Patient ſome eaſe by anodine Cataplaſms and *Colliriums*, and a ſtrict Courſe of Living.

Q. *How will you conjecture when the Small-pox is like to produce* Ulcers *in the Eye?*

A. If there was an Inflammation in the Eyes, before any Pocks appear'd in the Body; if he feels a great Pain in his Eyes, and cannot open the Lids.

Q. *What is to be applied in ſuch a Caſe?*

A. Mucilages of *Sem. Cydonior. Lini, Fenugrec.* &c. made with *Aq; Roſar.* or *Lac. Mulieb.* with Saffron in it

Q. *But ſuppoſe theſe* Ulcers *proceed from a* Venereal Cauſe.

A. Firſt cure the Pox, and theſe *Ulcers* will vaniſh; however, as ſomething in the mean time muſt be done, ℞ *Vin. Alb.* ℔j *Aq; Plantag.* ℥vj *Auripigment.* ℥ij *Virid. æris* ℥j *Alloes, Mirrh. ana* ℈j *fiat Collirium*, &c.

Q. *But if through Neglect, or Ignorance, the Eyelid grows to the* Conjunctiva *or* Cornea, *what muſt be done.*

A. This is called, in Latin, *Coalitus*: If the Lid cleaves to the Black, the Sight is altogether hinder-

hindered; but if to the White, it is only impaired; and sometimes they cleave to neither, but to one another. And now as to the Cure; if the Eye-lid cleave to the *Cornea*, against the *Apple* of the Eye, the Sight never will be perfect again: But in attempting the Cure, proceed thus, Place the Patient in a convenient Posture, and lift up the Eye-lid which cleaves to the Membranes, and put between it and the Membrane, in that Part which is free, a fit Instrument, blunt on the back part, and very sharp before, and the Point armed; then artificially and dextrously separate the Parts united, taking care not to hurt the Eye: Then apply a *Collirium*, *Ex Aq; Plant. & Troch. Alb. Rhas.* and keep the Parts asunder with small Dorsels of Lint, put between the Parts disjoyn'd, and wet Boulsters in the *Collirium*, and apply over all, and roll him up: Dress it twice a Day, and continue this Method till it is whole.

CHAP. XXVII.

Of an Ozæna.

Q. *WHat is an* Ozæna ?

A. It is a malignant *Ulcer* in the Noſtrils, about the Holes of the *Ethmoides*, cauſed of ſharp Humors eroding the Parts, attended with a ſtinking Smell, and ſometimes with Cruſts.

Q. *What are the Prognoſticks in an* Ozæna ?

A. (1) They are all hard of Cure. (2.) That which is hid, is of a harder Cure than that which appears.

Q. *Why are they hard of Cure* ?

A. (1.) Becauſe the Brain ſends plenty of corrupt Humors. (2.) Becauſe the Part is of a moiſt Nature.

Q. *How is ſuch an* Ulcer *to be cured* ?

A. By obſerving a good Diet, as in other *Ulcers* has been taught, and by Phlebotomy and Purging ; and laſtly, by fit Applications.

Q. *What think you of* Mercurial *Preparations* ?

A. They are moſt effectual in the Cure of this *Ulcer*, whether it be ſimply of it ſelf, or a Symptom of the *Pox*.

Q. *Well ; but what are your local Medicines* ?

A. I will firſt endeavour the Removal of the Cruſt, which is fix'd in the fore-part of the *Os Ethmoides*, or *Os Cribriforme ; which I do thus* : I turn the Patient's Face upwards, and his Head bent back ; then with a Feather, I drop in warm, Morning and Evening, *Ol. Amidg. Dulc. & Sperm. Cæti* mix'd, and let him at the ſame time draw in his Breath, till he feels the taſte of it in his Mouth ;

Mouth; and this Method I continue every Day, till the Cruſt is ſoft; which, when I find it is ſo, I then, (after dropping in the Oil) at every dreſſing, cauſe him to ſnuff ſome *ſternutory Powder* up his Noſe, which, by cauſing him to ſneeze, will force out ſome of the looſe Cruſt: Which Method I daily uſe till all is diſcharged; then, inſtead of the Oil, uſe a Compoſition made of ſome of theſe Medicaments, *Aq; Plantag. Fol. Querci, Allum. Balauſt Spir. Vitriol. Mel. Roſ. Syr. Roſ. Sic.* &c. Which muſt be injected warm twice a Day; and after Injection, that the Part may not ſoon become dry, apply ſome fit Unguent; as *Unguent. Tutiæ, Alb. Camph. ana* ℥ſs *Mercur. Dulcis*, ℥j *miſce*, &c. Which Method, if rightly followed, will anſwer your Deſires, without applying the actual Cautery.

Q. *What is the* Os Ethmoides, *where you ſay the Seat of an* Ozæna *is?*

A. It is ſometimes called *Ethmoides*, and ſometimes *Os Cribriforme*, indifferently: It is the ſecond common Bone of the Scull and upper Jaw: it is ſeated in the *middle Baſis* of the Fore-head, at the top of the Noſtrils, and joyn'd by a *Suture* to the *Os Frontis*; it, like a Sieve, hath many Holes, by which the *Filaments* of the *Olfactory Nerves* paſs into the Noſtrils, *&c.*

CHAP. XXVIII.

Of Ulcers *of the Mouth.*

Q. *WHat is to be done when the wrinkled Skin which covers the* Os Palati *is ulcerate?*

A. Scarce any thing is more certain and speedy, than this common Medicine of *Mel. Rosar. & Allum. ust. ana q. s.* Or, *Aq; Plantag. & Mel. Rosar. cum Ol. Sulph. q. s.* And afterwards heal with *Syr. è Ros. Sicc. & Spir. Vit. q. v.*

Q. *But suppose the* Os Palati *is bare?*

A. Then to the former Syrups add some *Pulv. Sarcocol. Irid. Mastich. Far. Hord.* &c.

Q. *What must be done if a piece of the* Os Palati *fall away?*

A. If it is but a small Piece, you must keep the Brims of the *Ulcer* raw, and use the Incarnatives here prescribed, and Union may be procured; but if a large Piece come away, all hopes of Unition are gone; and all that can be done, is, to cause the Patient to wear a Plate of Silver to supply the Defect.

Q. *If the Tongue prove ulcerate, what will you apply?*

A. If it be *mild*, a Decoction of *Hord. Gallic. Althææ, Liquorit.* &c. *cum Syr. violar.* may serve; but if the *Ulcers* be malignant, as sometimes this Part is seized with a *Phagedæna* and *Nome*, be sure to administer in time *Merc. Dulcis*, in fit Doses, and often repeated, and apply'd to the *Ulcer* also: And as to the rest of the Cure, it may be gather'd from what is already delivered in the Chapter of *Phagedæna*, &c.

Q. *What*

Q. *What is your Method in* Ulcers *of the* Uvula?

A. If they be mild, thoſe things preſcribed in *Ulcers* of the Tongue may ſuffice; but if the *Ulcer* be fretting, it is either to be cured by *Exciſion*, or by fit Applications; *viz.* make a Gargle, *Ex fol. Plantag. Veronic. Sigil. Solomon. Scord. & Origan.* In which diſſolve *Mel. Anglic. q. v.* And after gargling, touch the *Ulcer* with *Mel. Roſar. Allum. uſt. & Egyptiac.* warm; and do this twice a Day till it be well.

Q. *But if you find it proves rebellious, and yields to no Applications, how muſt it be cut off?*

A. Firſt purge the Body; and if the *Uvula* be ſmall about the Root, it will be ſo much the better (nay, indeed it will not be ſafe without it;) then with Sciſſors, or other fit Inſtrument, cut it off, and cauterize the Part with a red-hot *Uvula Spoon*, or other fit Inſtrument, to reſtrain the Flux of Blood, *&c.*

Q. *If the* Tonſillæ, *or* Almonds, *be ulcerate, how are they to be cured?*

A. Make an Electuary, *Ex rad. Irid. florent. Cent. min. Mirrhæ, & mel diſpumat.* and be often applying it. And if the Throat be ulcerate beyond the *Uvula*, ℞ *Aq; limat. ferri & plantag ana* ℔ſs *flor. Roſ. Rub. balauſt. ana* ʒvj *allum rup.* ʒij *Digerant. in arenâ per Hor.* xxiv. *& Coletur, pro uſu:* And give *Mercur. Dulc.* inwardly, as you ſee occaſion. And if they are hard, and much tumified, and in a long time yield to no Applications; but are troubleſome, and apt to choak the Patient; the readieſt way is Exciſion; which is not difficult to do, with the Probe-Sciſſors, if Ligature be made on the Part: And the *Hemorrhage* may be readily ſtopp'd with a Gargariſm of Exicrate, or by applying gently a Cautery-Button.

CHAP. XXIX.

Of Wounds.

Q. *What is a Wound?*

A. It is *properly* a Solution of Continuity in any part of the Body, caused by an external cutting Instrument; it is in Greek called τραῦμα, in Latin *Vulnus.*

Q. *How many Intentions are there in the Cure of a Wound?*

A. Five, (*viz.*) (1.) To draw forth any extraneous Body. (2.) To bring the Lips together. (3.) To retain the same. (4.) Preserving the Tone of the Part. (5.) To correct Accidents that are already seiz'd on the Part, and to prevent others.

Q. *What do you term* Extraneous *Bodies?*

A. Shot, Hair, Rags, Dirt, Gravel, Splinters, or whatever is foreign to the Part wounded; which are to be extracted with that variety of Instruments, that the Nature of the Body and Position of the Member requires.

Q. *Is this a general Rule without Exception?*

A. No: For where you see the Wound is of it self mortal, and where it cannot be done but with great pain and difficulty, and where the Wound may be cured without it, or leaden Bullets lodged deep in the great Joynts, in these Cases Extraction it not to be attempted.

Q. *Which way are extraneous Bodies to be extracted?*

A. By the same way they went in, except there is more fear of a Flux of Blood, or cutting a Nerve

Nerve, by the extraction that way than on the contrary Part; or that the Figure of the extraneous Body is such, that it will not so easily pass back the same way it went, as it will through the Part opposite.

Q. *How is Bleeding in a Wound to be stopped?*

A. (1.) By restringent Medicines, as *Pulv. Galeni*, *Bole*, &c. mixed with *Posca*. (2.) By Deligation of the Vessel. (3.) By Injection of astringent Medicines, when we cannot come at the Vessel. (4.) By the actual or potential Cautery. (5) By good Compress and Bandage.

Q. *How many sorts of Union are there in a Wound?*

A. Two; (*viz.*) *Symphisis*, and *Syssarcosis*.

Q. *What is* Symphisis?

A. It is the Union of Parts disjoyned, *no* middle Substance coming between; and this is called healing, *by the first intention.*

Q. *What is* Syssarcosis?

A. It is the Union of Parts disjoyned *by* a middle Substance.

Q. *How are the Parts disjoyned, brought together, and retain'd so?*

A. By stitching the Wound, and by good Bandage.

Q. *How is the Tone of the Part to be preserved?*

A. (1.) By a right ordering of the Non-naturals. (2.) The Medicines may not exceed in any Quality; (*viz.*) either hot, cold, moist, or dry. (3.) Bandage must be uniform, and neither too hard nor too slack. (4.) Take care, by a spare Diet, Lenitives, and Phlebotomy, to keep the Body from a Feaver. (5) Let them abstain from *Venery.*

Q. *What are reckoned* Accidents *in a Wound?*

A. Pain, Inflammation, Convulsion, and Mortification.

Q. *How*

Q. *How are theſe corrected?*

A. As for Pain, if it proceeds from any external Cauſe, as hard Bandage, extraneous Bodies, *&c.* it is to be remedied by *looſening* the one, and *extracting* the other; but if from neither of theſe, then *Anodines* are to be apply'd, ſuch as have been already ſubſcribed: *Inflammations* are remedied by Phlebotomy, Lenitives, and cooling Applications. In *Convulſions* recourſe is to be had to *Unguent. Martiat. Ol. Succini, Juniperi, Spir. Caſtorij, Salviæ, Luvendulæ, Ol. Rutæ, Lumbricor. Vulpin.* &c. Some apply'd to the Part, ſome given at the Mouth, ſome by Gliſters, and ſome ſmelt to. And a *Mortification* is remedied by Scarrification, Fomentation, *Ol. Terebinth.* ſcalding-hot, *Spir. Vin. & Ægyptiacum, Mercur. precipit. Rub.* &c.

Q. *What ſort of Wounds are to be cured by* Symphiſis, *or* Agglutination?

A. All, whoſe Lips can conveniently be brought and kept together, by *ſtitching* and *rolling*, and where there is no great Contuſion, nor loſs of Subſtance.

Q. *What is to be obſerved when you come to ſtitch a Wound?*

A. (1.) Let it be done gently. (2.) Let the Parts be equally brought together. (3.) If the Brims be ſtiff, by reaſon of long being undreſs'd, let them be fomented with *Hydrelæum.* (4.) No *Dorſel* nor *Pledget* muſt be put between the Parts.

Q. *What is* Hydrelæum?

A. Oil and *Water* mixed, according to diſcretion.

Q. *How many ſorts of Stitching are there in common uſe?*

A. Two; (*viz.*) *Laqueatio*, or dry Stiching, and *Sutura*, or Stiching with a Needle.

Q. *What is* dry Stiching?

A. It

A It is when Pieces of Cloth, cut *jagged*, or *Saw-like*, being placed on each ſide of the Wound, are ſtuck on, by a fit Medicine, and ſo the diſjoyned Parts are brought together; and the Pieces of Cloth being ſewed to each other over the Wound, keep it in a *uniting Poſture*, without paſſing a Needle through the Fleſh or Skin.

Q. *In what Caſes do you apply the* dry Stitch?

A. (1.) If we cannot come conveniently to roll the wounded Part, as in all tranſverſe Wounds. (2.) In Wounds of the Face, to avoid a Scar. (3.) If the Patient will not admit of ſtitching.

Q. *How is the Cloth to be prepared?*

A. (1.) The two Pieces muſt exactly anſwer to one another. (2.) Let them be either doubled or hemm'd. (3.) Let them be ſtrong, that they yield not to the ſtitch.

Q. *By what Means are theſe Cloths made to ſtick?*

A. Diſſolve *Ichthiocolla in aceto & Coq; ad Conſiſt. Empl.* Or Medicines may be formed *Ex farin. volat. Maſtich. gipſi, gum. tragacanth. & araboc. Bitumen Colophon, albumen ovi*, &c. Theſe ſpread upon the Cloths, muſt be apply'd and ſuffer'd to dry on, before they be ſtitched, that they may not give way, and let the Stitches be about an Inch aſunder. You may compound your Matter for the *dry Stitch* thus: ℞ *pulv. Bol. ver. & Maſtich. ana ana* ℥j *thuris pinguid.* ℥iſs *taccamabac.* ℥ij, mix them well with a hot Peſtle and Mortar, and ſpread it, and let it lye on ſome time for it to ſtick well, before you ſtitch the Cloth.

Q. *How many Ways are there of ſtitching with a Needle in Wounds?*

A. Firſt the Glovers Stitch, which is uſed in the wounded Guts, *&c.* The ſecond kind is performed by taking divers Stitches, as far diſtant as the nature of the Wound requires, and at every

Stitch

Stitch to cut the Thread. The third is called *Gaſtroraphia*; this is made uſe of when the *Peritoneum* is divided by a large Wound, (and ſhall be diſcourſed of, when we come to treat of Wounds of that Part.) The fourth is, when the Needle is left in the Wound, being paſſed thro' both Parts, and the Lips brought cloſe together, and the Thread paſſed about both Parts, *as when a Taylor faſtens it on his Sleeve*: And this ſort of Stitch is of uſe in *Hare-lips*, and in Wounds of the *Aſpera Arteria*, or Wind-pipe; but if you ſee fit, the Ends of the Needle may be ſnipped off.

Q. *Of what uſe is Stitching in Wounds?*

A. To keep the Lips of them cloſe, in order to their ſpeedy healing, and to reſtrain their bleeding.

Q. *What is to be obſerv'd in Stitching?*

A. (1.) Beware of Nerves. (2.) In long Wounds begin from the ends, in ſhort ones in the middle. (3.) Let the Stitches be diſtant the breadth of a Finger. (4) In deep Wounds, let the Stitches be deep; in ſuperficial ones, the contrary. (5.) In Wounds made according to the length of the Member, ſtitching is not ſo neceſſary, becauſe rolling will do the Work near as well.

Q. *What is* Faſciatio, *or Rolling?*

A. It is when we labour to keep the Lips of the Wound together by Slips of Linnen-cloth, cut in a *due length* and *breadth*, and made of Cloth only *half worn*, and of an *indifferent fineneſs*.

Q. *How long is it generally before Wounds that are ſtitched are agglutinated?*

A. Commonly in two, three, or four Days, if they are well managed; and then the Stitches may be cut, and the Threads drawn forth.

Q. *How many kinds of* Rolling *are commonly in uſe?*

A. Four;

A. Four; (*viz.*) *Incarnativa*, *Retentiva*, *Expulſiva*, and *Æquans*; which are better underſtood by Practice, than deſcribed by Words.

Q. *In what Caſes are we to reject the Cure of Wounds by* Agglutination, *and heal them by* Concarnation?

A. (1.) If there is loſs of Subſtance. (2.) In great Wounds of the *Joynts*, and when the *Ligaments* and great *Tendon* of the Heel are cut in ſunder. (3.) When we look for the *Scaling of a Bone*, or the Separation of a Piece of a *Ligament* or *Tendon*. (4.) When the *Jugular Veins* and *Soporal Arteries* are divided in Wounds of the Neck.

Q. *How is* Incarnation *performed?*

A. It has been already taught in the Doctrine of *Ulcers*, to which you are to have recourſe.

CHAP. XXX.

Of Gun-ſhot Wounds.

Q. ARE *Gun-ſhot Wounds* poiſonous?

A. No: For both the Shot and moſt of the Ingredients of the Powder are uſed, both internally and externally, for the Cure of ſeveral Diſeaſes, with ſucceſs.

Q. *What are the* Symptoms *of a Gun-ſhot Wound?*

A. Contuſion, Pain, Inflammation, Convulſion, heat and change of Colour, being ſometimes of a Blue or Violet-colour, ſometimes the Wound is Black, and the Parts adjacent Livid, *&c.*

Q. *What are the* Prognoſticks *in theſe Wounds?*

A. If only a fleſhy Part be wounded, and the Conſtitution good, it is of eaſie Cure; but if the Conſtitution be bad, with Fracture of the Bone,

or

or Laceration of the Nerves, Tendons, and Ligaments, the Cure is difficult, and at the best they are harder of Cure than other Wounds.

Q. *Why?*

A. (1.) By reason of the *Contusion* which always attends them. (2.) They more *slowly digest* than others, because the *natural Heat* is much abated, and the *Spirits dissipated*, by reason of the *Contusion.*

Q. *How many* Intentions *are there in Curing these Wounds?*

A. (1.) To draw out all *extraneous Bodies*, as Bullets, Pieces of Garment, contused Flesh, Shivers of Bones, *&c.* And, (2.) To apply *convenient Medicines.*

Q. *What is your Method of Cure?*

A. Extraneous Bodies being extracted, if the Wound bleeds much, dress it up for the present with Restrictives and good Bandage, and at the next dressing hasten to convert the contus'd Flesh into *Pus*; which may be done by arming your Tents with a Liniment compos'd *ex tereb. ven. Mel. Myrrh. croc. angl. vitel. ovi. ol. Catellorum*, &c. With which arm your Tents and Pledgets; and over the Wound (to ease Pain, and cherish the natural Heat, and help forward Digestion) apply a Cataplasm *ex Mic. pan. Rad. altheæ, flor. Chamemel. Mellilot. Hiperic. Absynth. farin. Hordei & fabarum & adde ol. Ros.* &c. Then Imbrocate the Part with *ol. Hiperic. & Rosar.* all round; and to the Parts above, to stop the Flux of Humours, apply a *Defensative.* Dress it twice a Day, if there be occasion; but in that your Judgment must direct you. Keep the Body soluble by Lenitives or Glisters, and daily give some vulnerary Drink, *&c.* composed *ex Rad. symphit. alchimil. salvæ. verban. scordii Hiperic. valerian. plantag. Consolid. Egrimon. fol. Ros.*

Rub.

Rub. Lign. Lentisc. &c. Or Powders and Electuaries *ex syr. symphit. mummia, bol. ver. Macis, Sperma cœti*, &c.

Q. *What must be done, if a* Gangreen *be feared?*

A. Then use *Ol. Lin. Terebinth. Gum mastich. Sal. armon. verid. æris Camphor.* & precipit Rub. also.

Q. *We will suppose the Wound now well digested, how must it be mundified?*

A. With *Mundificativ. ex apio*, or *Paracelsi*; to which (if the Wound be foul) add a little *Unguent. Ægyptiac.* and if the *Sinus* be very deep, inject a Decoction made of some of the *vulnerary Herbs*, in Wine, and add some *Mel. anglican.* &c. then Incarn and Siccatrize, as in other Wounds.

Q. *What Cautions are to be us'd in Dressing these Wounds?*

A. (1.) Use no *Escharotic* Medicines. (2.) Take care to shorten and lessen the Tents as the Wound incarns. (3.) If the Contusion be large about the Parts, they are to be scarrified. (4.) If the Parts are burned, they are to be dressed with such Medicines as profit in Burnings. (5.) Forbear restringent Medicines, because they keep in *putrid Vapors*, which may cause a *Gangreen*.

Q. *But suppose the Bone be fractur'd?*

A. Then it is to be reduced, and the Wound dressed with *Tereb. Venet. Ol. Terebinth. Hiperic. & Cattellor. cum Euphorb. Tutia*, &c. which will both digest the Wound, and help to scale the Bone; but if there is a *Comminution* of the Bone, or a Fracture of the Joynt; if you would not be counted ignorant nor careless in your Art, immediately amputate the Limb.

Q. *How, or with what Instruments, are Bullets to be extracted?*

A. If they are lodged in a Bone, the *Terebellum* is the only Instrument; but if in a fleshy Part, the

the *Ducks-bills, Crows-bills, Cranes-bills, ſmall and long Forceps*, are more proper; and the Patient muſt be plac'd as near as may be in the ſame Poſture he was in when the Wound was inflicted, if the Bullet cannot eaſily be found otherwiſe.

Q. *Suppoſe I find it at a* contrary Part *of the Body, and ſo cannot extract it?*

A. Then, if you feel it lying *ſuperficially*, cut upon it and take it out.

Q. *But ſuppoſe I cannot by any means find it, will it kill the Patient?*

A. Many Men have carried leaden Bullets lodged in their Fleſh for many Years, without any manifeſt Prejudice; however, place the Patient in the Poſture he was in when he received the Wound, and try what you can do; for it is certainly beſt to extract it, if you can.

CHAP. XXXI.

Of Wounds of the Head.

Q. *WHat is principally to be conſider'd in Wounds of the Head?*

A. The moſt common are theſe; (1.) To *avert* the Humor from the wounded Part. (2.) The general Prognoſticks. (3.) To preſcribe fit Medicines to aſſwage Pain and Inflammation. (4.) Good Rolling.

Q. *How is the Humor to be* averted?

A. By Purging, Bleeding, and right ordering of the *ſix Non-naturals.*

Q. *When is* Phlebotomy *to be adminiſtred?*

A. (1.) If the Wound did not ſufficiently bleed at firſt. (2.) If it be large, and the Patient ſtrong.

(3.)

(3.) If an Inflammation has seized the Part, or a Feaver the Patient.

Q. *In what Cases are you to Purge, in Wounds of the Head?*

A. (1.) If there be *Head-ach* or *Lumpishness.* (2.) If there be *Tumor* or *Inflammation.* (3.) If the Body be *Cacochymical.*

Q. *What is mostly to be shunn'd in these Wounds?*

A. (1.) All *Wine*, till fourteen Days are over. (2.) If there is a Fracture, *neither Flesh nor Fish* is to be allowed for the first seven Days. (3.) *Venery*, above all things, during the *whole Cure*

Q. *What are the Prognosticks in Wounds of the Head?*

A. (1.) No Wounds of the Head are to be slighted; for sometimes, altho' there is no Fracture, fearful Accidents follow. (2.) It is more hard, or easie, according to the Climate or Season of the Year. (3.) Where there is a *Pox*, or an ill Habit of Body, it is most difficult. (4.) *Contused* Wounds of the Head are more difficult than *incised* Wounds. (5.) Wounds in the Fore-part of the Head, are more dangerous than those of the Hinder-part. (6) Wounds of the *Temples* are most dangerous. (7.) Wounds on the *Sutures* are attended with the same. (8.) If no Feaver, Convulsion, Raving, Palsie, Doating, *&c.* seize the Patient, and good *Quittor* appear, and the Body be soluble, they are all good Signs, *& è contra.* (9.) *Callus* is procured in 40 or 50 Days. (10.) If a Swelling does suddenly vanish, it is an ill Sign, unless some Evacuation has gone before.

Q. *Why are* contused Wounds *more* difficult *than* incised ones?

A. Because they require *greater Suppuration.*

Q. *Why are Wounds of the* Fore-part, *of more dangerous Cure than those of the* Hinder-part?

A. (1.) Becauſe *more Brain* is contain'd in this Part. (2.) The containing Parts are thinner. (3.) Becauſe more *noxious Humors* may be gathered there, by reaſon of the multitude of *Cells*.

Q. *Why are Wounds of the* Temples *ſo very dangerous?*

A. (1.) Becauſe the continual Motion of the lower Jaw doth hinder *Union.* (2.) Becauſe the Branches of the *Jugular Veins* and *Soporal Arteries* are diſtributed there. (3.) Becauſe of the temporal Muſcle, on which the Motion of the lower Jaw depends, and which, being cut *thwart*, draws the Face *awry*, and impedes the Motion of the lower Jaw.

Q. *Why are Wounds on the* Sutures *dangerous?*

A. (1.) Becauſe the Scull is there parted, and ſo Matter may fall down and hurt the Brain. (2.) Becauſe of the *Ligaments* which paſs thro', from the *Meninges* to the *Pericranium*.

Q. *How is the Head to be rolled?*

A. It is impoſſible to expreſs it *ſo intelligibly*, as that a Stranger ſhould by the Directions exactly perform it; let it be done *equally*, and with many *Circumvolutions*, according as the Caſe requires; the Rollers ought to be made of ſoft Linnen, half worn, of about three Inches broad, or leſs; and as long as is needful.

CHAP.

CHAP. XXXII.

Of Wounds of the Parts placed above the Scull.

Q. *IF a Contuſion of the hairy Scalp, without a Wound, preſent it ſelf, how ought it to be treated?*

A. (1.) Immediately bleed. (2.) Uſe repelling Medicines, which ſee in the Doctrine of Tumors.

Q. *But if after the Pain is gone, a Tumor ſhould remain?*

A. Then uſe *Diſcutients?*

Q. *But if notwithſtanding all you can do, the Tumor does not vaniſh, what muſt be done?*

A. Make Inciſion, and if the *Cranium* be not foul, conclude the Cure by moderate Compreſſion, and drying and mundifying Medicines, ſuch as *Syr. e Succ. Roſar. de abſynth. terebinth alloes, myrrh. &c.* And if the Scull be foul, firſt ſmooth the Bone with a *Raſpatory*, and endeavour to procure a thin Scale, by application of *Pulv. myrrh. gentian ariſtol. rot. ſarcocol maſtich.* &c. then Incarn and Siccatrize, as has been taught in other Caſes.

Q. *How is a* tranſverſe *Wound of the* temporal Muſcle *to be dreſſed?*

A. Bring the Lips cloſe together, by ſtitching the Skin; then dreſs the Wound with *Liniment. Arcei* warm, and apply over all *Empl. Paracelſ.* a little malaxed with *ol. Hiperic. cum gum.* or ſome vulnerary Balſam, *&c.*

Q. *But I will ſuppoſe the temporal Muſcle wounded according to its length?*

A. Firſt ſtop the Bleeding, and ſtitch the Lips of the Wound, and dreſs, as I ſaid but now; then lay his Head inclining on a Pillow.

Q. *But how will you ſtop the Bleeding?*

A. If it will not be reſtrained by *ordinary Means*, then paſs a Needle thro' the *muſculous Fleſh* into the Wound, and from thence to the outward Part, compaſſing the *great Veſſels* with a double Thread; between which, and the Veſſels, put a little *Dorſel* of Lint, to prevent cutting aſunder the Parts, and to avoid Pain; then make *Ligation*, and dreſs him up.

Q. *Suppoſe the Wound in any other Part above the Scull?*

A. Then it is to be cured either by *Agglutination* or *Incarnation.*

Q. *How by* Agglutination?

A. Firſt ſtitch it up uniform, then apply a Pledget dipp'd in *Albumin. ovi*; the next Day dreſs with *Liniment. arcei* warm; and if it yield much *Quittor*, dreſs it twice a Day, till it is well; which is commonly in four or ſix Days.

Q. *How by* Incarnation?

A. If the Bone is bare, apply the *Cephalick Powder* laſt mentioned, and over that *dry Lint*; then fill the Wound with Pledgets dipt in *Liniment. arcei* warm, and ſo conclude the Cure; but the way of Stitching is far better.

Q. *How are* Humors *to be* averted *from a wounded Head?*

A. To prevent Pain and Inflammation, apply a Cataplaſm, *Ex farin. hord.* boiled in *poſca*, or *Vin. Rub. & Ol. Roſar.* or one made *Ex medull. panis Lac. Recent. Unguent. popul. pulv. Croci*, &c. which (the Head being ſhaved, and the Wound artificially dreſt) is to be apply'd over all.

Q. *Suppoſe a* Contuſion *joyn'd to a Wound?*

A. Firſt waſh the Wound with *Tinct. myrrh.* or *Spir. vini*; and if no loſs of Subſtance, nor the Contuſion very great, ſtitch it, and dreſs with

Lini-

Liniment. arcei, (and if it be deep, keep a Tent in the *depending Part*, until it yields *laudable Matter*, and then take it out) and apply an *Emplaister*, or *Cataplasm* over all.

CHAP. XXXIII.

Of a Fracture of the Scull.

Q. *What are the Signs of a Fracture in* Cranio?

A. They are either (1.) apparent to *Sense*, or (2.) found out by a *reasonable Conjecture*; those of the first sort are manifest to the Eye, or found out by the Finger or Probe; those of the second sort, are a Singing of the Ears, Swooning, Slumbering, Giddiness, an Issuing of Blood from the Nose, Ears and Mouth, Vomiting, Raving; the Patient often puts his Hand to the Part; there is sometimes Convulsions, Palsie of one Side, Faltering of Speech, Memory impaired, Dulness of Judgment, *&c.*

Q. *Do those Symptoms always attend these sort of Fractures?*

A. No; for I have known a Patient with a Fracture thro' both the Tables, with the Bone press'd in upon the *Dura Mater*, (without wounding it) that had none of these Symptoms, *except Bleeding at the Ears*: And another that had both a Fracture and large Fissure, that had no Symptoms of either, except Convulsions for a few Hours *only*.

Q. *But suppose none of these Symptoms offer, and yet you suspect a Fracture; by what other Method will you satisfie your self?*

A. If the Hair be cut in sunder, and stick up in the Wound, or if the Patient upon violently

chewing of Paper on both ſides of his Jaws, feels a Cruſhing; or if he holds a Thread with a Knot at the End, hard between his Teeth, and if it be ſuddenly *jerked*, he feels a Pain in the Part, there is then room for Suſpition. That I had once a Patient, who had *all* the Symptoms of ſuch a Fracture, *at firſt*; and *ſome* of them (at times) for Six Weeks together; yet having no Wound, nor Tumor, whereby to guide me ſo as to make Inciſion, like an Artiſt, by Cephalicks, Phlebotomy, Gliſters, Veſiccatories, Cupping, and proper Topicks, the Patient recovered, and remains ſtill well, for ought I know: But I never heard of the like; and inſtance this, to caution you not to be too haſty in making *Inciſion*, leſt you do it, and find neither Fracture, Fiſſure, nor Depreſſion, and ſo be juſtly condemn'd, for Raſhneſs and want of Judgment.

Q. *What are your Prognoſticks in theſe Fractures?*

A. (1.) Pronounce not all Danger paſt, till an *hundred Days* be over. (2.) Every Fracture in the Scull is dangerous. (3.) If a Feaver follows, if the Brims of the Wound grow flat at ſecond dreſſing, and do not ſwell, there is danger. (4.) If the Wound grows dry, or is black, the Tongue falters, Memory fails, the Eyes grow dim, a weak Pulſe, and Palſie or Convulſion, Death is at hand; but if none of theſe Signs, then hope the beſt. (5.) Wounds with a Fracture of the *Sinciput*, or Forepart of the Head, are more dangerous than thoſe of the *Occiput*, or Hinder-part. (6.) Fractures in the *Temple-bones* are moſt dangerous: And (7) ſo are thoſe on the *Sutures*.

Q. *Why are Fractures on the* Sinciput *worſe than thoſe of the* Occiput?

A. (1.) Becauſe theſe are more thin than the other. (2.) Becauſe more Brain is there contain'd.

(3.)

(3.) Becauſe in the Fore-part, there are ſeveral *Vaultings*, by which the Brain may be eaſily wounded. (4.) Becauſe of the thinneſs of the Skin in the Fore-part: And (5.) becauſe there are many and large Veins, which may cauſe a large Hemorrhage.

Q. *Why are Fractures in the* Temple-bones *ſo dangerous?*

A (1.) Becauſe theſe Bones are thin and weak. (2.) Becauſe there are Veins, Arteries and Nerves. (3.) Becauſe the *Pericranium* doth clip the temporal Muſcle, and the Muſcle hath in the middle a *Tendon* of very *great Senſe*.

Q. *Why are Fractures on the* Sutures *dangerous?*

A. The Reaſon is already given, where we diſcourſed of Wounds of the Parts above the Scull.

CHAP. XXXIV.

Of the Section of the hairy Scalp, and opening the Scull.

Q. *IN what Parts of the Head may* Section *be ſafely made?*

A. In *all Parts*, except the *Sutures*, and on the *temporal Muſcles*; not on the *Sutures*, becauſe of the exquiſite Senſe of thoſe Filaments which tye the *Meninges* to the *Pericranium*, and paſs thro' the *Sutures*; and not on the *temporal Muſcles* for Reaſons already given.

Q. *Of what form is the Inciſion to be made?*

A. It is generally done in the form of a St. *Andrew's Croſs*; but it is to be obſerved, that you be ſure to make no *tranſverſe Inciſion* a little above the Eye-lid, leſt the *frontal Muſcle* being *tranſverſly* divided, an incurable Palſie of the Eye-lid does

inſue; wherefore in thoſe Places the Inciſion is to be made, either *ſtreight* or *oblique*, but not *tranſverſe*.

Q. *When Inciſion is made, what is to be done next?*

A. Begin from the Points of the Inciſion, and ſeparate the *Pericranium* from the *Cranium*, either with your Nails or *Spatula*, ſo far as that you can ſee the whole Fracture plainly; then to the Bone apply dry Lint, and fill up the Inciſion with Dorſels, arm'd wieh a *Reſtrictive*, to ſtay the bleeding, and keep the Lips aſunder; and over all a Bolſter; then roll it up, and open it not, till 24 Hours are paſt, if you can help it.

Q. *Why is the Scull to be opened?*

A. (1.) That Pieces of the Weapon may be removed. (2) That Pieces of the Scull, which are ſeparated from the whole, may be taken out. (3.) That the depreſſed Piece, which is thruſt down upon, and offends the *Meninges*, may be taken away, or reduced to its Place. (4.) For removal of *Quittor* and coagulated Blood.

Q. *How much of the Bone is to be taken away?*

A. Either all the fractur'd Bone, or part of it.

Q. *In what Caſes is all the fractur'd Bone to be taken away?*

A. (1.) If it be on the Crown, where no depending Vent can be given for diſcharge of Matter. (2.) All the *ſhiver'd Bones* are to be taken out in any place. (3.) So much is to be taken away, as covering the *Dura Mater*, becomes black.

Q. *What is to be conſider'd, when only part of the Bone is to be removed?*

A. That it be done on a depending Part, and that the *Trafine*, or *Trepan*, take in part of the Sound, and part of the fractur'd Bone.

Q. *Is there no Exception againſt this Rule, in opening it in a depending Part?*

A. Yes;

A. Yes; for if the Brain appear, the *Dura* and *Pia Mater* being wounded, it muſt be ſhunn'd; becauſe the *Brain* being *fluid*, would be apt to fall down to the depending Part.

Q. *What are the chief Inſtruments with which you open the Scull?*

A. They are *Raſpatories*, *Levatories*, *Gimblets*, called *Terebellæ*, and the *Trepan*, or *Trafine*.

Q. *What is to be obſerved in the uſe of* Raſpatories?

A. Set the Patient in a good Light, ſtop his Ears, and hold his Head ſteady, and cover the Brims of the Wound with Pieces of Linnen-cloth; then firſt begin with the broadeſt; then the leſs broad, and laſt of all the narroweſt, being often moiſten'd with Oil; or Vinegar and Water, if Blood appear; then dreſs it up as you do after the *Trepan*, of which we ſhall diſcourſe by and by.

Q. *In what Caſes are* Raſpatories *to be uſed?*

A. In Fiſſures, or Chinks, and in a *Sedes*, when the Print of the Weapon is narrow.

Q. *What is the* Gimblet *or* Terebellum, *and its uſe?*

A. It is ſuch an Inſtrument as Coopers uſe to raiſe up the Heads of Cask; its Point is made to Screw; its Uſe is to raiſe up a depreſſed Piece of Scull, by firſt making a ſmall Hole with the Pin of the *Trepan*, and then ſcrewing in this Inſtrument, and raiſing up the Bone.

Q. *What is the uſe of the* Levator?

A. To raiſe up a depreſs'd Bone, after trafining.

Q. *In what Parts muſt the* Trafine *not be applied?*

A. Not wholly upon the *Fracture*, nor on a *Suture*, nor to the places a little above the *Eye-brows*, nor to the *Temples*, nor to the lower part of the Scull, (if the *Meninges* be wounded) nor laſtly, to the *Sinciput* of Children not above 7 Years old.

Q. *What is to be obſerved in applying this Inſtrument?*

A.

A. (1.) Take out the Pin when you are come to the *ſecond Table.* (2.) Take it often out, and moiſten it with Oil. (3.) Take care to cut all Parts equally, ſo as that you may not be through on one ſide, when you are not half thro' on the other. (4) When it begins to ſhake, take it out with the Levator. (5) If any roughneſs remain, ſmooth it.

Q. *How is it then to be ordered?*

A. Firſt apply a Piece of Taffaty or Sarſnet (with a piece of fine Silk faſten'd to it, leſt it ſlip between the *Cranium* and *Dura Mater*, and ſo you loſe it) on the *Dura Mater*, dipp'd in *Mel Roſar.* and *Ol. Roſar.* or *Mel Roſ. & Spir. Vini*, or *Ol. Roſ. & Reſin*; to the Bone *dry Lint*, and to the Lips a *Digeſtive*; then roll the Head up, and lay the Patient in a *quiet Place* to reſt, free from Noiſe.

Q. *In how long time will the Bone ſcale?*

A. Some ſay in forty, others in fifty Days; but indeed, *no certain time* can be ſet for it.

Q. *Suppoſe a Depreſſion of the Scull, without a Wound* in a Child, *without any ill Symptom?*

A. If the Blood *fluctuate* up and down under the Skin, then apply to the Part a ſoft double Linnen-cloth, moiſtened in *Ol. Roſar. Alb. Ovi & Aceto*; which keep on 24 Hours, but firſt remember to ſhave away the Hair: and after this, until the eleventh Day, apply a Cataplaſm, *Ex fol. Roſ. Rub. Bacc. Mirt. Farin. Hord & Fabar. fol. Abſynth. Sem. Cymini*, &c. *& Coq; in Vin. Rub. & ad Ol. Roſ. & alde Mel. Anglican.* Apply this twice a Day warm; and from the eleventh to the twentieth Day, only apply *Diapalma* ſoften'd with *Ol. Lillior.*

Q. *But if a Fracture in* Cranio *happen to a Child with ill Symptoms.*

A. Then it is neceſſary that the Scull be opened; which being done, they are to be treated as Men are, only more tenderly.

CHAP.

CHAP. XXXV.

Of the Cure of Fractures of the Scull appearing in the wounded Part.

Q. *What is a* ſimple Fracture *of the Scull?*

A. It is when there is no Wound, and when the Fracture is of *one only* kind.

Q. *How many ſorts of theſe* ſimple Fractures *are there?*

A. Three; (*viz.*) *Rima*, or *Fiſſura*, a Chink, or Cleft. (2.) *Contuſio*, a Contuſion of the Scull. (3.) *Sedes*, when the Print of the wounding Inſtrument is left in the Scull.

Q. *Does a* Fiſſure *always paſs through both Tables of the Scull?*

A. No: ſometimes only through the firſt; and then it is to be ſo far *dilated*, to give a diſcharge to the *contuſed Blood*; but if thro' both Tables, the dilation is to be accordingly.

Q. *But if you diſtruſt that there is a* Fiſſure, *yet if it is ſo ſmall that you cannot ſee it; how will you find it out?*

A. If upon the Patient's holding his Breath, and ſtretching out his Breaſt, a thin Humor, or *bloody Sanies*, do iſſue out, it is a certain Sign; or if you apply *Ink* to the Part *moſt ſuſpicious*, made thin with Vinegar to make it penetrate, and the next Dreſſing dry the Scull with a Sponge, and if you ſee any print of the Ink to remain in the Scull, you may judge a *Fiſſure* to be there.

Q. *Are* Fiſſures *to have a* Trepan *apply'd upon them?*

A. No;

A. No; unleſs it has been ſome time received, and bad Symptoms attend it; but otherwiſe it is to be dilated with *Raſpatories*, and cured as when the *Trafine* is applied.

Q. *How is a* Sedes *to be cured?*

A. If it paſs through *both Tables*, and no Splinters of Bone prick the *Meninges*, and the Weapon has made ſufficient way for the diſcharge of *Matter*, no further *Apertion* is to be made, but it is to be dreſſed as when the *Trepan* is applied; but if any Splinters of the Bone do offend, or the *Apertion* is too narrow, a further Opening muſt be made; and if it only paſs thro' the firſt Table, the Bone is to be *ſmoothed* by *Raſpatories*, and dreſſed with *Liniment. Arcei*; and it often falls out, where the Patient is of a good Conſtitution, that the Bone does not ſcale at all, eſpecially if to the *Tinct. Myrrh.* ſome Drops of *Spir. C. C.* be added, and apply'd to the Bone.

Q. *How is a* Contuſion *of the Scull to be cured?*

A. The contuſed Part is to be taken away with *Raſpatories*, and then to be healed as in the latter Part of the Cure of a *Sedes* is directed.

Q. *What is a compound Fracture of the Scull?*

A. When to the Solution of Unity there is joyned, either *loſs of Subſtance*, or ſome part is removed from its own place.

Q. *How many ſorts are there of it?*

A. Three; (*viz.*) *Depreſſio*, a Depreſſion; *Concameratio*, a Vaulting; or *Exciſio*, a part of the Scull *wholly* cut off.

Q. *If in a Depreſſion, one part of the Bone cleave to the whole, and the other not, what muſt be done?*

A. Apply the *Trepan* as near to the fractur'd part as you can, and then reduce the depreſſed Bone to its place; or elſe remove it, as you ſee moſt neceſſary, taking great Care not to hurt the *Meninges.*

Q. *What*

Q. *What is* Concameratio, *or Vaulting*?

A. It is when the Scull, being pierced with a ſharp-pointed Weapon, and with Violence pulled up again, it ſometimes heaves up one Table, and ſometimes both, and leaves a Hallowneſs or *Vault* underneath.

Q. *How is it to be cured*?

A. If it only paſs thro' the firſt Table, ſmooth it, and proceed, as has been directed; but if it paſs thro' both Tables, apply the *Trafine* on the moſt depending Part, and proceed as before directed.

Q. *How is* Exciſio *to be cured*?

A. If the Piece cut away, cleave to the *Cutis Muſculoſa*, and the Wound go no deeper than the firſt Table, the Piece is to be ſeparated from the Fleſh, then the Bone to be raſped, and cured as a *Sedes*: But if both Tables be cut off, and ſtick to the *Cutis Muſculoſa*, firſt waſh the Wound with *Spir. Vin.* and reduce the Pieces to their place, and ſtitch the Wound exactly.

Q. *What is a* Diſſolution *of a* Suture?

A. It is, when thoſe Parts of the *Cranium*, which are united by the *Suture* gape, and are ſeparated by ſome violent Blow or Fall.

Q. *What is a* Colliſion *of a* Suture?

A. It is a Contuſion of its Brims, (as I told you before) and of the *Ligament* which paſſed thro' it, from the *Meninges* to the *Pericranium*, which cauſeth fearful Symptoms, and which ſometimes obligeth us to apply the *Trafine* on one ſide the *Suture*, &c.

Q. *Suppoſe a Fracture under the* Temporal Muſcle?

A. If it be with a *Puncture*, or tranſverſe Wound, it is *very dangerous*; but if it be *long-ways*, it is to be dilated by Dorſels of Sponge; and if there be

a *Fiſſure*, by *Raſpatories*; but if there be a great Fracture or Depreſſion, then make a *triangular* Inciſion a little above the Fracture, ſhunning the *temporal Muſcle*, and the *Trepan* is to be applied, and the Shivers of Bone to be taken away, and the reſt reduced to their place; then dreſs as before directed.

Q. *But how muſt the* Sanies *be expell'd out of the Wound?*

A. At every Dreſſing cauſe the Patient to bend down his Head, and to ſtop his Mouth and Noſe, and breathe ſtrongly, to expel it from the Wound; then inject ſome *mundifying Decoction*, to waſh out all Filth, and dreſs up *ſecundum artem.*

Q. *I have heard it* confidently *reported, and by ſome Men affirm'd* vehemently, *that have had* Fractures *in* Cranio, *that the Surgeon who cured them, put in a Piece of Gold, where the Bone came out, and healed the Wound over it: Pray how can this be?*

A. The Patient that believed ſo, was a Fool; and that Surgeon that pretended to do ſo, was a Knave; and put the Piece of Gold in his Pocket, and not in the Patient's Scull: The thing is impoſſible, and more fit for the Creed of an Old Woman, than a Surgeon. Not but I believe ſuch a thing has been often *pretended*; and moſt Country People really think ſo; but it is all a Trick, and Piece of Deceit, unbecoming an honeſt Surgeon.

CHAP.

CHAP. XXXVI.

Of a Contra Fiſſura.

Q. *WHat is a* Contra Fiſſura ?

A It is when the *Cranium* is ſtricken upon *one Part*, and fractur'd in *another* ; and this either in the ſelf-ſame Bone, or in divers Bones, as when the right *Bregma* is ſtruck, and the left by the ſame Blow, is *cleft* ; and ſometimes when the Blow is upon the *upper Table* that remains whole, and the *lower Table* is *fiſſur'd.*

Q. *What is the Reaſon of this ?*

A. This happens to thoſe whoſe *Sutures* are very obſcure and cloſe, in whom, when the Air which is within the Scull, is ſtrongly moved by a Blow, and on every ſide is driven by the Force of it, it is entirely carried through the Subſtance of the Brain to the oppoſite Part, which when it meets with the Scull, which by reaſon of its firmneſs cannot yield, gives way to a Fracture ; as a Glaſs, which ſometimes being knocked on one ſide, is crack'd on the other by the ſame Blow.

Q. *How is this kind of Fracture to be found out ?*

A. If no *Fiſſure* appear in the Wound, and yet there is the Symptoms of a Fracture, then you have reaſon to take a view of the oppoſite Part ; or if you find a Tumor in the oppoſite Part, or that the Patient often puts his Hand to it, you may ſuſpect a Fracture or Fiſſure there : But if no Tumor appears to guide you, ſhave the Head, and apply to the oppoſite Part this Emplaiſter, ℞ *Pic. Naval. & Cer. ana* ℥iij *terebinth.* ℥j *maſtich. & irid. pulv. ana* ℥ij *f. Empl.* Spread it upon Leather

ther and apply it, and let it lie 24 Hours; and if when you take it away, any part of the Skin appears *more moiſt* than the reſt, you may ſuſpect that the Hurt is there.

Q. *Suppoſe the ſecond Table to be fractur'd, the firſt remaining whole?*

A. Then the *Trepan* is to be applied, to make way for coagulated Blood.

Q. *When the* Contra Fiſſura *is found, what is to be done?*

A. Dilate the Chink with *Raſpatories*, and proceed as before directed.

Q. *Suppoſe a* Contuſion *on the Head without a Wound?*

A. The Symptoms will inform you, if there be a Fracture; which if there be, you muſt make Inciſion to come at it; but if there be not, ſhave off the Hair, and apply a Cataplaſm, *Ex far. hord. acet. vin. Rub. pulv. Roſ. Rub. Bacc. Myrtill. Maſtic. ol. Roſ.* &c. Then open a Vein, and the next Morning give a gentle Cathartick; alſo drop into the Ears, and moiſten the Paſſages of the Noſe with *Ol. Amidg. Dulc.* About the ſeventh Day apply *Empl. de Betonica*, malaxed with *Ol. Roſ.* And now, if fearful Symptoms begin to appear, let Inciſion be no longer delay'd.

Q. *How will you judge the* Dura Mater *to be hurt, when you have no Wound, nor apparent Fracture?*

A. When there is a Bleeding at the Ears, a Stupidity, and a pricking Pain in the Part, when the Patient blows his Noſe, *&c.*

CHAP.

CHAP. XXXVII.

Of Wounds in the Meninges and Brain.

Q. *HOW many Inconveniences may happen to the* Dura Mater ?

A. Five : (*viz.*) a Wound, Pain, Inflammation, Apoſtemation, and Diſcollouration.

Q. *Suppoſe an immoderate Flux of Blood happen in a Wound there ?*

A. If the Weapon has not made way enough to come to it, it muſt be made ; and apply *pulv. valeni*, to reſtrain the Flux ?

Q. *How is Pain to be aſſwaged here ?*

A. Uſe no *Narcotick*, nor common unctuous mollifying Medicines, but apply *Ol. Roſor. & Mel. Roſar.* artificially mixed.

Q. *Do theſe ſort of Wounds admit of Stitching ?*

A. No, they are to be cured by Incarnation.

Q. *Suppoſe an Inflammation happen, in a Wound on the* Dura Mater ?

A. Bleed, and uſe a ſlender Diet, then foment with a Decoction, *Ex Altheæ. ſem. Lin. & fenugræc. fol violar.* &c. and apply *Ol. Roſar.* and if occaſion be, dilate the Scull.

Q. *How is it to be known if* quittor *be contained in an Apoſtemation there ?*

A. By the extraordinary Whiteneſs of ſome part of it.

Q. *How is it to be opened ?*

A. Very warily, for fear of offending the Brain, then apply *Syr. E. Roſ. Sicc.* or *Mel. Roſar.*

Q. *From whence does* Diſcollouration *of that part proceed ?*

A. From the *Violence* of the *Blow*; from *coagulated Blood*; from the *Coldneſs* of the *Air*; by application of improper Medicines, and from *Putrifaction.*

Q. *Suppoſe it proceed from the Violence of the Blow?*

A. Then apply *Ol. & Mel. Roſar.* or *Ol. ovor. cum Spir. vin. & pulv. Croc. q. ſ.*

Q. *But what if it proceed from coagulated Blood?*

A. Then dreſs it with a Compoſition, *Ex Spir. vin. mel. Croc. Sarcocol.* &c. boiled to blackneſs.

Q. *Suppoſe bad Applications have been the Cauſe?*

A. Then Medicines of a contrary Quality are to be applied.

Q. *How will you know if Blackneſs proceeds from Putrifaction?*

A. By the ſtrong Smell of the *Sanies.*

Q. *What is then to be uſed?*

A. Such as theſe artificially compounded and mixt, *Spir. vin. Syr. Abſinth. Mel. Roſ. Ægyptiac. Sarcocol. Mirrh. Alloes vin. alb.* &c.

Q. *What are mortal Signs in this Caſe?*

A. If the Tumor and Putrifaction increaſes notwithſtanding all that can be done; if the Eyes bunch out; the Patient is reſtleſs and raving, you may believe that Death is at hand.

Q. *How is Bleeding, and alſo Wounds to be cured in the* Pia Mater?

A. As thoſe of the *Dura Mater.*

Q. *How many Griefs may happen to the Brain?*

A. A Wound, Apoſtemation, Putrifaction, Sideration, Concuſſion, Fungus and Tumor, by reaſon of Flatuoſity.

Q. *What are the Signs of a wounded Brain?*

A. A Feaver, vomiting of Choler, loſs of Speech, Slumbering, Stupidity, dimneſs of Sight, Giddineſs, Foaming, Convulſion; or if the Meninges are both divided, and a ſubſtance like Fat comes

comes out, which will neither ſwim above the Water, nor melt with the Fire, but is thick, round, and of a marrowy Subſtance; it is a part of the Brain.

Q. *Are ſuch Wounds curable or not?*

A. Some pretend that they have been *ſo happy* as to effect a Cure; *and ſince it has been done,* we are to do our beſt Endeavours, and leave the Succeſs to God; but at the beſt they are very dangerous.

Q. *Why?*

A. (1.) By reaſon of the nobleneſs of the Part, and the neceſſary Uſes of the Functions of it. (2.) By reaſon of the Motion of the Brain. (3.) The Moiſtneſs. (4.) The Coldneſs. (5.) The Conſent of the Nerves which ſpring from thence. And (6.) Becauſe Medicines do not eaſily paſs to the wounded Brain.

Q. *How are Wounds of the Brain to be cured, if curable?*

A. Firſt foment with a Decoction, *Ex Hyperic. Betonic. Calamint. Chamem. Aneth. Euphrag.* &c. and then (till the 7th Day) uſe *ol. Terib. & ol. Roſ.*

Q. *Suppoſe it be of a livid Colour?*

A. Then dreſs it with *Spir. vin. ol. Roſ. & Mel. Roſar.* &c.

Q. *Suppoſe it yields a laudable Matter?*

A. Then uſe only *Syr. Roſ. Sicc. cum aq; vita,* or *Spir. vini.*

Q. *What Symptoms remain commonly after Wounds of the Brain are cured?*

A. Faltering of Speech, and Palſy of the Arms.

Q. *How is a Putrifaction and Sideration to be diſcerned or remedied?*

A. They are not to be diſcover'd but by opening the Scull, and that moſt commonly when the Patient is dead.

Q. *What think you of a* Concuſſion, *or violent Commotion of the Brain?*

A. It is to be dreſſed as a Fracture of the Scull without a Wound, open a Vein, and inject ſharp Cliſters; but beware of applying aſtringent Medicines, becauſe they keep in the *fuliginous Vapours*. Sometimes a *Concuſſion* is attended with the Symptoms of a Fracture, or Fiſſure; and ſometimes it brings Death, if not managed with the utmoſt Skill and Care; and ſometimes even that is all too little to ſave Life.

Q. *What will you do if a* Fungus *ariſes?*

A. Apply Medicines which ſtrongly dry, and mildly fret, as *pulv. Sabin. Hermodact. uſt. pulv. turpeth.* &c. If it grow up very large above the *Cranium*, then bind it with a Ligature to procure its fall; but beware of uſing *Catheretical* Means.

Q. *How is a* Giddineſs *cauſed in Wounds of the Brain?*

A. It is cauſed from the Circulation and Circumvolution of the Animal Spirits.

Q. *How comes dimneſs of the Sight and Slumbering?*

A. From Diſſipation of the Animal Spirits.

Q. *How is Vomiting cauſed here?*

A. The Brain being troubled, the Affection is communicated by the Nerves of the *ſixth Conjugation* which proceeding from the Brain, are diſperſed thro' the whole Body of the Stomach, which is drawn inward, purſued and turn'd upwards, from whence thoſe things which are contained in the Capacity of it, are rejected by Vomiting; and *Choler* being moſt *light*, is firſt vomited up.

Q. *From whence proceeds a* Torpor *or Stupidity?*

A. From ill Vapours which aſſault the Brain, and diſſipate the *Animal Spirits*.

Q. *From whence comes Convulſion?*

A. From

A. From corrupt Vapours, which nip the *beginning of the Nerves.*

Q. *What is to be done in such a Case?*

A. Anoint the Neck and *Spinalis Medulla* with a Composition, *Ex fol. Rut. marrub. Rorismar. Ebuli. Salviæ. paralis bacc. lauri. Flor. Cham. Mellilot. Hiper. macer. in vin. alb. dein. Coq; cum ol. Lumbricor. terebinth. auxung. anseris & human.* &c. *ad Consumpt. vini. tum. Colat. & adde tereb. ven. aq; vitæ & Ceræ;* &c.

CHAP. XXXVIII.

Of Wounds happening to the Instruments of the Sences.

Q. WHY *are Wounds of the* Eye *difficult of Cure?*

A. (1.) Because of the excellency of the part it self. (2.) Because of its exquisite Sense. (3.) Because of the Consent it hath with the Brain. (4.) Because of the great Flux of Humors falling upon a wounded Eye. (5.) Because of the continued Motion of the Arteries.

Q. *What are the Differences of Wounds of the Eye?*

A. They are either superficial, which pass not through the *Cornea*; or deep, which do penetrate through it.

Q. *What are we principally to observe in the Cure of these Wounds?*

A. (1.) That we use no oily nor fat things. (2.) That when one Eye is wounded, we rowl up both. (3.) That the Head lie high, bending forwards; and the Reasons are: (1.) All Oily things inflame the Eye, and cause Pain; and (2.) We

rowl both Eyes up, becauſe Light, at ſuch a time, is prejudicial to the Eye, and if only one Eye be rowled up, and the other expoſed, that which is ſo expoſed moves, and by its Motion cauſes the wounded Eye to move alſo, which retards the Cure.

Q. *How is Pain to be aſſwaged in ſuperficial Wounds of the Eye?*

A. Things of modern uſe are, *Aq; Sperm. Ranar. Roſar. plantag. portulac. pluvial. mucilag ſem. pſillii tragacanth. papav. Hyoſciam. decoct. nuc. Cupreſs, balauſt. lac. Muliebr. ſang. turturum & pullorum, Columb.* &c.

Q. *How are theſe to be applied?*

A. Unleſs Matter abound, it will be ſufficient (the Eye being ſhut) to apply them above the Eye-lid, and then to the Forehead apply *pulp pomor. ſub. Ciner. Coct. flor. Caſſ. mucilag. ſem. pſillii. Cidonior, far. hordei. Cribrat. bol. arm.* &c.

Q. *Suppoſe the Eye-lid and the* Tunica Conjunctiva *both wounded?*

A. Then great Care is to be taken, that they do not grow together; which may be done by applying *fol. auri* between them.

Q. *How is it to be dreſſed if the* aqueous Humor *comes out?*

A. If it all comes out, the Sight will be loſt; but if only part, not ſo; eſpecially in Children; and this is cured as a ſuperficial Wound.

Q. *But, what think you if the* Criſtaline *and* vitreous *Humors comes out?*

A. Then the Sight is of neceſſity loſt.

Q. *How is ſuch an Eye to be dreſſed?*

A. With *Lap. tutiæ, & Calaminar. preparat. ter. ſigillat. ſang. dracon. Sarcocol.* &c. very finely ſearched.

Q. *How will you dreſs the Wounds of the Ear?*

A. If

A. If it be wholly cut off, dress it throughout as other Wounds; if it be only divided, and that but in part, the dry Stitch may serve; but if it be large, a Needle and Silk must be used, taking care to pass it through the Skin [only], and not the Ear, for fear of an *Inflammation*, *Pain* and *Mortification*, and then use strong Desiccatives, and if it reach to the *meatus auditorius*, you must keep the Ear stopped with a Sponge-tent to prevent a *Fungus* and *Matter* falling in, which might corrupt the *Tympanum* or *Drum*, and cause Deafness.

Q. *How are Wounds of the Nose to be ordered?*

A. If the Wound be simple, what I but now laid down concerning Wounds of the Ear, may be sufficient; but if there be a Fracture, it is to be reduced, and Quills or Pipes kept in the Nostrils, with good Boulsters and Bandage.

Q. *How would you dress the Tongue, was it wounded?*

A. If it is wholly cut off, it is not to be restored; but if it be not cut quite off, although it hangs but by a fleshy Thread, you must try to stitch it, and that deep too, that it do not break out again; then cut off the Thread, and use Lotions *Ex aq; plantag. Syr. Mirtil. Ros. Sicc. allum Roch.* and let him hold *Sacc. Ros.* in his Mouth, and let his Diet be of Jellies and liquid things.

CHAP. XXXIX.

Of Wounds of the Veſſels of the Throat.

Q. *WHat think you of the* internal Jugular Vein, *and* Soporal Arteries *being wounded?*

A. Theſe commonly bring Death.

Q. *Why?*

A. (1.) Becauſe no good Ligature can be made on theſe Parts to ſtop the Bleeding, for fear of choaking the Patient. (2.) Becauſe they immediately deprive a Man of *Vital Spirit* by the great Flux of Blood.

Q. *How then muſt we attempt to ſtop the Bleeding?*

A. By fit Medicaments, and by Deligation.

Q. *What are your Medicaments?*

A. Either *Reſtrictive* or *Eſcharotical*; the *Reſtrictive* are theſe, *Alloes, ſang. drac. far. volat. Hipociſt. Maſtich. Surcocol.* &c. The *Eſcharotical* are, either ſuch as procure a *Cruſt*, or elſe the *actual Cautery*; thoſe which procure a *Cruſt*, are made of ſome of the foregoing Powders mixed with *Calx viv. Calcanth. arſenic. ſublimat. auripigment*, &c. mixt with *alb. ovi*, and applied on Tents and Dorſels, and held hard on, continually by ſome *Stander-by*, and not to be removed in leſs than three Days; and then if the lowermoſt ſtick faſt, let it alone till it digeſts off of its own accord, for fear of a freſh Flux of Blood.

Q. *But upon Suppoſition that theſe Methods prove fruitleſs, and we are forced to bind the Ends of the Veſſels, how is that to be done?*

A. Raiſe up the Veſſels from the Parts to which they adhere, with a ſmall Hook of Silver, then you

you are to bound them *above and below the Wound* ſtrongly, and cut them aſunder between the Deligations; then digeſt, incarn, &c. *S. A.* uſing all the time a ſlender, cooling, *glutinous Diet*; keep the Body ſoluble, and rightly order the Non-naturals, *&c.*

Q. *Suppoſe one of the* recurrent Nerves *are cut aſunder?*

A. Then uſe Balſams made *ex Ol. Hiperic. Liniment. arcei. tereb. ven. bol. arm. Alloes, Mirrh. Maſtich,* &c. which will conſolidate according to your deſire.

Q. *What Accidents follow upon the* recurrent Nerves *being cut?*

A. If but one be cut aſunder, the Voice becomes hoarſe; but if both be divided, the Speech is quite taken away.

Q. *Why are they called* recurrent Nerves?

A. Becauſe they come down from the *ſixth Pair* of Nerves, and return upwards towards the Muſcles of the *Larinx*, uſing in the left part, the Trunk of the *Aorta*, and on the right the *Axillar Arteries* as Pullies.

CHAP.

CHAP XL.

Of Wounds of the Neck.

Q. *What Symptoms attend the* Aſpera Arteria, *or Wind-pipe, being wounded?*

A. (1.) The Breath comes out at the Wound. (2.) Blood comes out at the Mouth. (3.) The Speech is hindered. (4.) A Cough troubles the Patient.

Q. *Are Wounds of the Wind-pipe mortal?*

A. Tho' they are not ſo of themſelves, yet by Accident they may become ſo.

Q. *Why?*

A. (1.) By reaſon of their fearful Symptoms, being ſo near the Jugular Veins, and *Soporal Arteries*, which are generally wounded with it; it hath alſo many Branches of the *Recurrent Nerves*, and ſundry Muſcles. (2.) Becauſe Medicines cannot be kept on. (3.) Blood may fall from the *Jugular Veins* upon the *Lungs*, and *ſuffocate* the Patient.

Q. *How are they to be cured?*

A. If they be *tranſverſe*, the wounded Patient muſt bend down his Head; but if *ſtreight*, he is to hold up his Head, that the Brims may be brought cloſe together; then treat it with Needles or Pins as in a Hair-Lip, becauſe Silk or Thread will rot; then apply *Liniment. arcei*, and over all *Diapalma* malaxed *cum Ol. Mirtill* &c. and take care that neither Blood nor Quittor fall upon the *Wind-pipe*, leaſt it choak the Patient; and if it be already lodged there, vent muſt be given to it in the depending Part, and a ſmall Silver Pipe put in, and there kept till the fearful Symptoms are all over.

Q. *Are*

Q. *Are no internal Means to be uſed?*

A. Yes; make *Gargariſms*, *Ex. hord. perlat. Flor. Roſ. Rub. Balauſt. Jujub. Uvar. paſſ. glicirrhiz. Syr. Mirtin.* &c.

Q. *What are the Signs of the* Oeſophagus *or Gullet being wounded?*

A. (1.) The Meat and Drink will come out at the Wound. (2.) There will be difficulty of Swallowing. (3.) Hiccough and Vomiting. (4.) Fainting and cold Sweats, with Coldneſs of the Hands and Feet.

Q. *What are the Prognoſticks in theſe Wounds?*

A. (1.) All theſe Wounds are of difficult Cure: (1.) Becauſe they bring difficulty of Breathing. (2.) Becauſe they can hardly be inflicted unleſs the *Aſpera Artera*, *Jugular Veins*, *Soporal Arteries*, and *Recurrent Nerves*, or ſome of them, be wounded alſo. (2.) The ſmaller the Wound, and the further from the Mouth of the Stomach, the leſs dangerous, *& è contra.* (3.) If it be wholly divided, the Cure is impoſſible, becauſe one part flies upwards, and the other contracts downwards.

Q. *How are theſe Wounds to be cured?*

A. The firſt intention is Stitching, taking care to leave an Orifice in the depending Part, for diſcharge of Matter, *&c.* then cure it as Wounds of the Wind-pipe.

Q. *What Diet is to be uſed?*

A. All his Food muſt be Liquid, and ſuch as will nouriſh very much, (*viz.*) New Milk, Almond Milk, with *Sacch. Roſat.* diſſolved in it; Chicken-broths, Emulſions, *&c.*

A. But ſuppoſe the Patient cannot ſwallow at all?

A. Then nouriſhing Gliſters are to be adminiſtred; but firſt give a purging one, to drive the Excrements out of the Guts; and remember that

in

in the nouriſhing Gliſters, you give no Oil, Salt, nor Sugar, becauſe thereby too ſpeedy Expulſion will be cauſed.

CHAP. XLI.

Of Wounds of the Breaſt.

Q. *WHat are the Signs of the Lungs being wounded?*

A. The Blood which comes forth is yellowiſh and frothy, there is a Cough, and difficulty of Breathing, with a Pain on that ſide, tho' the Patient is moſt at eaſe when he lies on it.

Q. *What are the Prognoſticks?*

A If the *vena Arterioſa* be wounded, they are deadly; and if the Party live, in Wounds of the Lungs, they commonly leave a *Fiſtula.*

Q *What are the Signs of a wounded* Diaphragma?

A. There is a heavineſs on that Part, a Raving, Aſthma, Cough, Pain, and Feaver.

Q. *What are the Prognoſticks?*

A. Wounds on the fleſhy Part of the *Diaphragma*, are dangerous; and if in the *Nervous Parts*, certain Death enſues; becauſe in the firſt caſe we cannot come to dreſs them, and they are in continual Motion; and becauſe the Parts within the Breaſt are eaſily inflam'd; and in the laſt caſe, by reaſon of Inflammation, a *Dilirium*, and ſometimes a Convulſion follows.

Q. *Why are Wounds of this Part ſo dangerous?*

A. (1.) Becauſe it is Membranous, and in continual motion. (2.) It is Nervous, and therefore painful. (3.) Becauſe the *Pericardium* is tied to it.

it. (4.) In Wounds of it, the Brain ſuffers by reaſon of the Nerves, which are incerted in it; the Heart by reaſon of its nearneſs, and the *Arteriæ Phrenicæ*; the Liver by reaſon of its Conjunction with the *Venæ Phrenicæ*. (5.) In Wounds of it, breathing is hindered. (6.) Becauſe Blood iſſues into the Cavity of the Breaſt. (7.) Pain of the *Spine* reaching to the Shoulder, attended with Cough, Feaver and Raving, *&c.*

Q. *Suppoſe the Heart to be wounded?*

A. If the Subſtance of it be wounded, it is to be reckoned deadly.

Q. *Why?*

A. Becauſe, (1.) It is the beginning of Life. (2.) It is the Laberatory of the vital Spirits. (3.) It is the Shop of the vital Blood. (4.) It is in continual Motion. (5.) It is an hot Entrail, and ſubject to Inflammation. (6.) Its Subſtance is *compact* and *dry*. (7.) Blood iſſues out from it into the Cavity of the Breaſt, which ſtifles the Patient.

Q. *How will you know that ſome great Veſſel in the Breaſt is wounded?*

A. By theſe Signs: (1.) Difficulty of Breathing. (2.) The Feaver increaſing. (3.) There will be vomiting of Blood. (4.) After the Blood putrifying, the Breath will ſtink. (5.) A depraved Appetite, a deſire to Vomit, coveting to lie down, and often Fainting, *&c.*

Q. *Why are Wounds of the Breaſt in general ſo dangerous?*

A. (1.) Becauſe of the great Flux of Blood, which cannot be ſtaid, becauſe theſe Wounds lie deep, and ſo will neither admit of rowling nor proper Applications. (2.) Becauſe the Coats of the Veins and Arteries are Membraneous, and cannot be cured by the firſt Intention. (3.) Becauſe the diſcharge of Matter is both difficult and dangerous.

gerous. (4.) Becauſe the Blood falling into the Cavity of the Breaſt, preſſes down the Diaphragma, cauſes difficulty of Breathing, and being converted to Quittor acquires a malignant Nature, and ſo may cauſe a Convulſion, Raving, and in time, an *Empyema*, *Pthiſis*, and hectick Feaver, if not Death.

Q. *What is the Method of Cure in penetrating Wounds of the Breaſt?*

A. (1.) Lay the Party in his Bed, with the Orifice of his Wound downwards, and let him endeavour by Coughing, and holding his Breath, to diſcharge the Blood fallen into the Cavity of the Breaſt; which being done, dip a *Flamula* in *alb. ovi*, and put him into the Wound, letting the greateſt part hang without it; or inſtead of a *Flamula*, a Silver or Leaden Pipe may be uſed, dipped in warm *Liniment. arcei*, and a *Diapalma* Plaiſter over all with good Boulſters and Rolling, which muſt be continued till the Wound diſcharges but a ſmall quantity of Matter.

Q. *What is the longeſt Time required for ordinary penetrating Wounds here?*

A. About Forty Days.

Q. *Is the Blood and Quittor to be diſcharged no way but by the Wound?*

A. Yes, both by Coughing it up, and by Urine.

Q. *How is it carried from the Cavity of the Breaſt to the Mouth?*

A. (1.) It is carried into the *Pleura*, then into the Subſtance of the Lungs; thence to the *Aſpera Arteria*, and ſo to the Mouth.

Q. *How is it ſent out by Urine?*

A. It paſſes firſt into the Subſtance of the *Pleura*, then into the *vena ſine pari* near the *Diaphragma*, where a Branch of it paſſes directly to the *Emulgents*, and ſo to the Kidneys and Bladder.

Q.

Q. *Proceed to the reſt of the Cure.*

A. The Patient dreſt as before directed, if there be Occaſion, bleed him, and give him ſome *vulnerary Potion*, wherein is *pulv. Rhab. Mummiæ, ter. ſigillat.* &c. and after this, daily a Decoction *Ex ſem. quator. frig. Maj. Rad. fenicul. petroſelin*, &c. or a *Decoct. pect. cum Syr. è quinq; radicibus, roſ. ſimpl.* &c. taking ℥vj every four Hours; or if Matter offer it ſelf, to be purged by Expectoration, then give *aq; font. cum aceto* warm; and if he Coughs with difficulty, give *Syr. tuſſilag. aut glicirrhiz. cum Syr. acetos.*

Q. *May no Injections be uſed?*

A. Yes, *as the Caſe may ſtand*; but beware (1.) That no bitter thing be put into them; and (2.) That care be taken that all the Injection come out again, and then upon the *Flamula* or Pipe, lay a Sponge wet in *S. V.* for the firſt four or five Days, to keep out the Air, and extract the Matter by a gentle heat. (3.) Uſe no Pledgets of Lint, leaſt by Inſpiration they be pulled into the Cavity of the Breaſt, and cauſe Putrifaction.

Q. *How often are* penetrating Wounds *of the* Breaſt *to be dreſſed?*

A. According to the ſmall or great Quantity of the Matter, once or twice a Day.

Q. *When is it time to ſuffer the Wound to cloſe?*

A. When the Patient breaths freely, finds but little Pain, and no Weight towards the Diaphragma, and the Quittor laudable, and but little in quantity.

CHAP.

CHAP. XLII.

Of penetrating Wounds of the Abdomen, without any hurt of the Parts contained.

Q. *HOW will you be certain if a Wound of the* Abdomen *penetrates, or not ?*

A. If the *Omentum*, or one of the *Inteſtines* ſtart out, or if you inject warm Wine, and it does not return, or if the Probe goes deep ſtraightways, you may judge it penetrates.

Q. *What are the Preſages in ſuch a Wound ?*

A. A Wound of the *Abdomen not penetrating*, is without danger, unleſs it be extraordinary large. (2.) A Wound on the middle Part is more dangerous than one on the ſides. (3.) All penetrating Wounds are dangerous. (4.) If any of the contained *remarkable* Parts are wounded, it commonly proves deadly.

Q. *Why are all penetrating Wounds there dangerous ?*

A. (1.) Becauſe they are moſtly large, and always deep. (2.) Becauſe the Air hurts the Inteſtines. And, (3.) becauſe the *Quittor* falls into the Cavity.

Q. *How are we to proceed in the Cure ?*

A. If any Part ſtart out, it is to be reſtored either by your Hand ; or if it has long hung out, and is tumified, it is to be done by a fomentation *Ex flor. Cham. mellilot. anethi. pulegii. tanaſet. Lavendul. abſinth. Bacc. Lauri. ſem. Cymini, aniſi,* &c. decocted in *vin. Rub. vel Lacte*, and if after reaſonable Fomentation you cannot reſtore it, the Wound is to be inlarged, to make way for it.

Q. *If*

Q. *If by reaſon of long continuing in the cold Air, the* Omentum *be cooled, hardned or livid, what muſt be done with it?*

A. Then tye it near to the ſound Part, and cut the corrupt Part away, letting the Thread hang out, till the corrupt Part ſeparates from the whole.

Q. *Why muſt Ligature be made in this Caſe?*

A. Becauſe otherwiſe much Blood would fall into the Cavity of the *Abdomen.*

Q. *The* Omentum *being reſtored, how are theſe Wounds to be ſtitched?*

A. Having a clear Light, and a good Aſſiſtant to hold up the Parts, you muſt lay the Patient on the ſide oppoſite to the Wound, that the Guts be not in your way; then take a good Needle fit for the Purpoſe, well armed with a good waxed Thread; and then, firſt, the Needle is to be thruſt thro' the Skin and the Muſcles, even to the *Peritonæum*, not touching it on that ſide; then from within, outwards the Needle is to be thruſt thro' both the *Peritonæum* and Muſcles of the oppoſite ſide; then at an Inch diſtance, the Needle is to be paſſed thro' the Muſcles of the ſame ſide, leaving the *Peritonæum*; and afterwards from within outwards, it is to be paſſed thro' the *Peritonæum* and Muſcles, and ſo proceed, ſometimes piercing the *Peritonæum*, and ſometimes forbearing it, till you have ſufficiently ſtitched the Wound which ought to be ſtrengthened by the *dry Stitch*, becauſe in a few Days the Thread will cut the Brims aſunder.

Q. *What Topicks will you then apply?*

A. All *vulnerary Balſams*, and agglutinative Emplaiſters, are proper; as *Balſ. lucatel. Linim. arcei, ol. hiperic. cum gum. ol. tereb. Sorcocol. Maſtich*, &c. mixed; and over all, *Empl. paracelſ. & ad hern.* mixed; and to prevent Pain, embrocate all the Parts about with *Ol. Roſar.* but remember to leave

an Opening in the depending Part, for the discharge of Matter, which otherwise would collect, and cause sad Accidents.

CHAP. XLIII.

Of Wounds of the Parts appointed for Chylification.

Q. *What are the Signs of the Stomach wounded?*

A. The Wound is under the *Cartilago ensiformis*, from whence *Chile* comes forth; also there is Hiccough, vomiting of Choler, and whatever is taken in by the Mouth; the Pulse grows weak, thin Sweats, and the Extremities of the Body grow cold, *&c.*

Q. *What are the Prognosticks?*

A. If they are superficial, they are of easie Cure; but if they are penetrating, and towards the bottom of the Stomach, they are deadly.

Q. *What do you mean by that word* deadly *?*

A. (1.) In a strict Sense, that which brings *inevitable Death.* (2.) In a more lax Sense, that which *most commonly* brings Death.

Q. *Why are they so dangerous?*

A. (1.) Because it is of a membranous Substance. (2.) The Brims of the Wound cannot be kept together by Ligature. (3.) Vulnerary Potions slip out of it. (4.) Meat and Drink keep asunder the Brims. And, (5.) it is a very sensible Part.

Q. *How are Wounds of the Stomach to be cured, if at all curable?*

A. The Tent must not enter the Stomach; only it is to keep open the Parts lying above it; let it be armed with *Tereb. ven. lot. cum vitel. ovi,* &c. and

and outwardly embrocate with *Ol. Roſar. & Mirtil.* and give him inwardly *Syr. Cydonior. vel granat. in aq; plantag.* or *vinc. per vinc.* and let him eat and drink very ſparingly.

Q. *What are the Signs of the ſmall Guts being wounded?*

A. The *Chile* comes out at the Wound, the Flanks ſwell, the Patient vomits Choler, and has the Hiccough, with great Gripings in the Belly.

Q. *Which are moſt dangerous being wounded? And why?*

A. Wounds of the ſmall ones are moſt dangerous; becauſe they are more nervous, and of a more exquiſite Senſe, are nearer to the Stomach, and have more *Meſaraical Veins*, beſides they diſtribute the *Chile*, and more refine it, and their Subſtance is more thin, and not ſo readily admit of agglutination as the great Guts do.

Q. *What are the Preſages in theſe Wounds?*

A. Thoſe of the ſmall Guts prove *moſt commonly* mortal; and amongſt theſe, Wounds of the *Jejunum* are the worſt.

Q. *How are theſe Wounds to be cured, if curable?*

A. If the Gut be not got without the Wound, it muſt be gently drawn out, and ſtitched with the Glover's Stitch, with Thread not waxed; then foment it with warm Red Wine, and reduce it to its place, ſtrowing over it *pulv. Sarcocol. Mirrh.* &c. and then the external Wound is to be ſtitched and dreſſed as has been taught in the Chapter of penetrating Wounds of the *Abdomen.* Then leaſt the Excrements ſhould *harden*, feed the Patient with moiſtening Meats; and as you ſee occaſion, give him *emollient Gliſters*: But here is no neceſſity for vulnerary Drinks.

CHAP. XLIV.

Of Wounds of the Liver, Spleen, Kidneys, emulgent Vein, Artery, and Bladder.

Q. *WHat are the Signs of a wounded Liver?*

A. A great Flux of Blood on the right ſide, and the ſide drawn towards the *Spine*; the Patient delights to lye upon his Belly, the *Scapula* ſtretched, and pricking Pains even to the Neck; they have a Feaver, and ſometimes void Blood by Urine, *&c.*

Q. *What are the Prognoſticks?*

A. If theſe Wounds are ſuperficial, they admit of Cure; if deep, not. (2.) If cold faint Sweats ſeize the Patient, and he thereupon grows weak, Death is at hand.

Q. *Why are deep Wounds here mortal?*

A. (1.) There is a great Flux of Blood. (2.) Inflammation. (3.) Vulnerary Potions loſe much of their Energy before they can reach the Part. (4.) It lies ſo deep that Medicines cannot well be applied. (5.) Matter cannot be diſcharged, and ſo the whole Liver may be corrupted, from whence Sanguification is hindered, and a Conſumption or Dropſy procured, *&c.*

Q. *What is to be done if you are called to dreſs ſuch a Wound?*

A. Diſſolve *aſtringent Troches in aq; plantag.* or *Burſa paſtoris cum Syr. Roſ. Sicc. Mirtil. & Granat.* &c. and give inwardly vulnerary Drinks, *&c.*

Q. *What are the Signs of a wounded Spleen?*

A. Black

A. Black Blood flows from the left Side; the Side and Stomach become hard; Thirſt increaſes, and the Pain reaches to the Neck.

Q. *What are the Preſages in this Caſe?*

A. Some affirm that the whole Spleen may be taken out, and the Patient live; tho' it is certain that deep Wounds of it are for the moſt part deadly; or at beſt, the Body becomes ill affected, ſo that Dropſy, Scabs, and ſuch Diſeaſes, may ſeize it.

Q. *Why do Wounds of it commonly prove mortal?*

A. (1.) Becauſe a great Flux of both *Venal* and *Arterial* Blood doth follow. (2.) It is a part helping Sanguification, and being wounded, is obſtructed in the performance of his Duty. (3.) It is eaſily inflamed. (4.) Becauſe it hath a great conſent with the Heart, by Communication of the Arteries; by which (from the Quittor and putrified Blood) *noiſome Vapours* may be ſent to the Heart.

Q. *How are theſe Wounds cured?*

A. As Wounds of the Liver.

Q. *What are the Signs if the Kidneys are wounded?*

A. If it reach to the *Pelvis*, clotted Blood will come forth by Urine; there will be a great Pain in the Part, which will reach to the Groin and Teſticles.

Q. *What are the Prognoſticks?*

A. (1.) If the Wound be received through the Back, it is Mortal. (2.) If it be received by the Side, and pierce no further than the *Caruncul Papillares*, it may be cured, but with much Difficulty. (3.) If it pierce to the *Pelvis*, it is moſt commonly deadly.

Q. *Why do Wounds of the Kidneys, received by the Back, prove Mortal?*

A. Becauſe the Wound muſt pierce the *Pſoa*, and the Nerves ſpringing therefrom, the *Spinalis Medulla* can hardly eſcape.

Q. *Why are theſe Wounds of difficult Cure, tho' penetrating no farther then to the* Carunculæ Papillares?

A. Becauſe both the Muſcles of the Belly and the Peritonæum muſt be wounded alſo, between whoſe Membranes the Kidneys are wrapped.

Q. *Why do the Wounds prove mortal, if they reach the* Pelvis?

A. (1.) Becauſe the draining of the Seroſity from the Veins and Arteries, is ſo very neceſſary, otherwiſe it would hinder the union of the Wound. (2.) Becauſe the Subſtance of it, being very *compact*, does very difficultly admit of Conſolidation.

Q. *Suppoſe the* Emulgent Vein *and* Artery *be wounded?*

A. Then Death may be expected, becauſe of the deſperate Flux of Blood which will enſue; nevertheleſs the Cure may be attempted by healing Injections, and giving inwardly vulnerary Potions, or *lac. recent.* in which diſſolve *Sacc. Roſat. troch. alkekengi cum opio*, or *ſine opio*, as your Judgment directs you.

Q. *What are the Signs of a wounded Bladder?*

A. (1.) The Urine comes bloody and ſparingly. (2.) If the Urine falls into the Cavity of the *Abdomen*, it will ſeem to be an *Aſcites*, and the Pain will be ſent to the Groins and Teſticles.

Q. *What are the Prognoſticks?*

A. (1.) Wounds in the fleſhy part of the Neck of the Bladder may be cured; as may thoſe in the Sides of the Groin, if the Patient be young. (2.) Wounds in the Membranous Parts of the Bladder are incurable, becauſe the Bladder is nervous, thin,

and

and has but little Blood, it is apt to mortifie; the Acrimony of the Urine will not suffer the Wound to heal; and it is attended with dreadful Symptoms.

Q. *How are these Wounds to be cured, if curable?*

A. (1.) Admit of no cold Water to be drank. (2.) Give vulnerary Potions, in which dissolve *Syr. Ros. Sicc. mel. Rosar. gum. tragacanth*, &c. and to the Wound apply *Terеb. Cipr. ol. over. vitel. ovi.* &c.

CHAP. XLV.

Of Wounds of the Nervous Parts.

Q. *WHat do you intend here, when you ſpeak of Wounds of the* Nervous Parts?

A. I mean *Nerves*, *Tendons*, and *Ligaments*.

Q. *By what Signs will you know a Nerve to be wounded?*

A. (1.) By the part; if many and great Nerves be in the place wounded, or that paſs by it. (2.) Pulſation, Raving, Convulſion, Inflammation, Mortification, *&c.*

Q. *What are the common* Accidents *happening to Nerves?*

A. A Puncture, an Inciſion, a Contuſion and Diſtortion.

Q. *What are the Prognoſticks in Wounds of the Nerves?*

A. All Wounds of the Nerves are dangerous.

Q. *Why?*

A. (1.) Becauſe the *Membrane*, with which they are covered, proceding from the *Meninges*, makes them *exquiſitely ſenſible*, and they are filled with *Animal Spirits*. (2.) Becauſe of their conſent with the Brain and the *Spinalis Medulla*. (3.) By reaſon of the fearful Symptoms which follow.

Q. *What are the general Indications of Cure?*

A. (1.) To prevent the flux of Humors, breathe a Vein, and give gentle Catharticks. (2.) Uſe a very ſlender Diet. (3.) Let the Air be warm. (4.) Uſe all your Applications warm.

Q. *How will you know when the heat of the Medicine is proportioned to that of the Part?*

A. (1.)

A. (1.) If the Patient, upon the application, feel a pleasant heat. (2.) If the Part is possessed with a pleasant Itching; but if the Party feel either no heat at all, or too much, upon the application of the Medicine, it is not as it ought to be.

Q. *How is a Puncture of a Nerve to be cured?*

A. By Medicines hot, dry, and of subtle parts, to digest, attract, and dry the Putrifaction; (*viz.*) *Ol. terebinth. Spir. vini. Euphorb. ol. Rosar. cum sal. Com.* &c.

Q. *But what will you do, if Symptoms do not abate upon these Applications?*

A. Then make cross Incision of the Skin, that Medicines may have their due *Energy* on the punctur'd Part, when perhaps it may be necessary to compound your Applications in milder forms.

Q. *Which is least dangerous, a* Nerve *quite divided, or only cut partly through?*

A. That quite divided.

Q. *Why so?*

A. Because then it cannot send any harm to the Brain; but *the use of the Part is for ever lost.*

Q. *How are such Wounds to be cured?*

A. The Topicks must be dry, and but very little biting, as *Unguent. de Calce lot.* &c. and by *Sartoticks*, such as in our Conference have been often repeated.

Q. *How must it be dress't, if but in part divided?*

A. As directed already at the beginning.

Q. *But if Symptoms do not abate, how then?*

A. Then, (rather than to expose the Patient to the danger of Death) it will be best, quite to divide it; then to use Anodine, and drying Medicines, with Fomentations, Cataplasms, *&c.* formerly prescribed.

Q. *Suppose the Nerve to be* contused *or bruised?*

A. If

A. If there is no ſolution of Unity, embrocrate with *Ol. Lumbricor & terebinth.* hot, and apply *Empl. ſtict. paracelſ.* malaxed with *Ol. Hiper. Comp.* &c. ſpread on Leather.

Q. *Suppoſe a* diſtortion *of the Nerve, which hinders the motion of the part?*

A. Embrocate *cum Unguent. nervin. & ol. terebinth.* and apply a *Cerot. Ex Empl. è mucilag. & gum. amoniacum.* &c.

Q. *But what muſt be done, if after this, a hardneſs and numbneſs of the part remains?*

A. Embrocate with *Ol. Ex. pedibus, bovin. lill. alb. adeps anſeris, & gum bdellii, cum mucilag. Ex Rad. Altheæ, ſem. lini & fenugræc.* warm, and over the part apply *Empl. diach. cum gummi,* ſoftned with *liquid Storax,* &c.

Q. *What muſt be done when an Inflammation attends a wounded Nerve?*

A. Embrocate *cum ol. Sambucin. & acet. Roſat.* and over all apply a Cataplaſm *Ex far. hord. orobi. Oximel,* &c.

Q. *What muſt be done to abate Pain?*

A. Bleed, purge, uſe a ſpare Diet, and apply a Cataplaſm, *Ex far. fabar. fol. Malv. & violar, coct. in Lacte. Recent. cum Unguent. populeon,* &c.

Q. *Suppoſe a Convulſion ſeize the Part?*

A. Embrocate the *Spine* and wounded Member *cum ol. Cham. lavendul. ſuccini, roriſmarin,* &c. hot, and apply to the Member the inſide of a Sheepsskin newly killed.

Q. *How will you know if a* Tendon *be wounded?*

A. (1.) If the Wound be near the Joynt. (2.) If it be in a part that is not fleſhy, *&c.*

Q. *What are the Indications of Cure?*

A. The ſame as thoſe in a wounded Nerve.

Q. *How are wounded Ligaments to be cured.*

A. By

A. By Medicines drying, and not too hot, *ol. Maſtich. Balſ. natural.* and conſolidating Powders.

CHAP. XLVI.

Of Wounds of the Joynts.

Q. *HOW are the Wounds of the Joynts to be cured?*

A. If it be a Puncture, it is to be managed as a Puncture in a Nerve or Tendon; but if it be by Inciſion, they are to be ſtitched, leaving a place for diſcharge of Matter in a depending Part; and let all your Applications be very drying, and apply'd hot, *Liniment. arcei, pulv. Mirrh. Sarcocol, Maſtich, Alloes,* &c. and over all apply a Cataplaſm *Ex far. hord. & fabar. Flor. Cham. melilot. acet. ſambuc. ol. Roſ. popul.* &c.

Q. *What is to be conſidered in theſe Wounds?*

A. Chiefly the due Poſition of a Member, that it may not be kept in ſuch a Poſture, as that the Limb may be uſeleſs when the Wound is healed.

Q. *How is that?*

A. (1.) If the upper part of the Shoulder be wounded, put a large Boulſter to the Arm-pit, and carry the Arm in a Scarf. (2.) If the lower part of the Arm be wounded, carry it in a Poſture between *Extention* and *Contraction*, and when the Lips unite, uſe a moderate Motion of the Limbs. (3.) If the Joynt of the Elbow be wounded, take care that it may not be too much contracted nor extended. (4.) If the Wriſts or Joynts of the Fingers be wounded, keep them half ſhut, moving a Ball in the Palm of the Hand; otherwiſe they may prove uſeleſs when the Wound is healed.

CHAP.

CHAP. XLVII.

Of Amputation.

Q. WHY *is Amputation performed?*

A. To preſerve the Life of the Patient, which otherwiſe would be loſt.—*Immedicabile vulnus enſe reſcidendum eſt.*

Q. *When is it to be done?*

A. When there is no Poſſibility of ſtaying the Mortification, or ſaving the Life and Limb without it.

Q. *In what Part is it to be made?*

A. If in the Arm or Thigh, it is to be as near the Wriſt or Knee as poſſible; but let it be where it will in the Leg, your way is to take it off about three or four Inches below the Knee; for a long Stump of the Leg is both troubleſome and unſeemly.

Q *How is it to be performed?*

A. Place the Patient to your Mind, having ſufficient help to aſſiſt you, let one of your Aſſiſtants *draw* up the Muſcles *very tite*, then about two or three Fingers breadth above where you deſign to take off the Limb, make a very hard Ligature, and a Hands breadth above that, make another ſlack; which muſt be turned about with a ſhort Stick, (which is called a *Batoon*, or a *Turniken*,) till it *numbs* the Part; then let one Aſſiſtant hold the upper Part, and another the lower Part of the Limb ſteady, then (ſtanding within ſide of the Limb) with two Stroaks of your diſmembring Knife, divide the Fleſh, (and with the back of it the *Perioſteum*) and then as near to the upper

upper Part as poſſible, with your Saw, take off the Bone, with as few Stroaks as you can, (remembring, that if there be two Bones, as below the Elbow and in the Leg, that you firſt divide between them with your *Catling*) then take Dorſels, being dipped in ſcalding hot *Ol. Terebinth.* and apply to the Mouths of the Veſſels; to the Bone a Pledget of dry Lint, and to the Stump two large Pledgets, one larger than the other, yet both ſo big as will cover all the Stump, armed with *pulv. Reſtring. maj.* made ſoft with *alb. ovi. & acetum*; all which keep hard on with your Hand, till your Aſſiſtant looſes the firſt Ligature, and ſhoves down the Muſcles over the Stump; then over all pull on an Ox Bladder, and over that a croſs Cloth hauled up *torte*, to keep all on firm, then with a ſingle Roller make ſeveral Turns about the croſs Cloth, rolling ſometimes upwards and ſometimes downwards till all be uſed; then with a double headed Roller, roll all the Dreſſings on equally to the Stump, taking care, that it be neither too *ſlack* nor too *torte*; (for the firſt would not reſtrain the Hemorrhage, and the ſecond would cauſe Pain, Inflammation and Mortification) then take off that Ligature belonging to the Batoon, or at leaſt, ſlacken it; and ſo put your Patient into his Bed, with his Stump raiſed, and ſome one to ſit by him, to apply their Hand to it, till the Dreſſings dry on.

Q. *Suppoſe you amputate for a Mortification?*

A. If poſſible, take it off two Fingers breadth above the Mortification; or if it ſo happens that you cannot, then after the Limb is off, you muſt apply to the Stump actual Cauteries, to dry up the Humidity, and recal the Spirits to the Parts; and then dreſs it up. *S. A.*

Q. *Is there no other way to ſtop Bleeding, but* Ol. Terebinth. *and the actual Cautery?*

A. Yes;

A. Yes; Many make Ligature on the Ends of the Veſſels; and if you amputate where there is great Veſſels, it will be convenient, inſtead of Dorſells, to have Buttons made of Tow, armed with a Reſtrictive, and dipt in *hott. ol. Tereb.* and ſo apply them, and dreſs up the Stump as before directed, having firſt made the *croſs Stitch*, which will help to ſtop the Flux of Blood, and make a round handſome Stump alſo: And indeed, the *croſs Stitch* is a more quick way than to take up the Arteries, and full as ſecure: For in all the Sea-Fights which I have been in, (which have been pretty many) I never uſed any other Method, and never had any Hemorrhage attending, nor ſucceeding it.

Q. *When is it to be opened again?*

A. Not till the third or fourth Day; but in the *interim* you are to ſee that it does not bleed, and eaſe the Bandage if there be occaſion.

Q. *How is it to be dreſſed the firſt Dreſſing?*

A. Have in readineſs ſome warm Water and a Sponge, to ſoften the Dreſſings, that they may be taken off, without cauſing a new Flux; which done, wipe it clean, and apply a dry Pledget to the Bone; and to the Stump, Pledgets armed either with *Baſilicon*, or a digeſtive *ex. Tereb. ven. vitel. ovi. far. tritic. ol. Cattellor.* or *Lumbricor. & Croc.* then with a Pledget of dry Tow over all, with a croſs Cloth and double-headed Roller, lay him by for that time.

Q. *And how then?*

A. The next day have in a readineſs a good Fomentation, in which let Stupes be wrung out ſcalding hot, and ſo applied for half an Hour together; then dreſs it up as you did the Day before, and ſo continue till the Wound is well digeſted; every Day dipping the Pledgets in *Spir. vini*

vini warm; and then cure it as other Wounds of the fleshy Parts, taking care to prevent a Feaver, or ill Accidents.

CHAP. XLVIII.

Of Gangrena or Mortification.

Q. *What is a Mortification?*

A. It is when the natural Heat of a Limb is *in part* extinguished; the Limb is discoloured, cold, and *in part* insensible.

Q. *What is a* Sphacelus *?*

A. It is when the natural Heat is *wholly* extinct, the Limb is *dead, livid, vesicated, quite insensible,* and *fœtid.*

Q. *What is to be done in this Case?*

A. Amputation without delay.

Q. *But suppose it is only a Mortification?*

A. Then scarifie the Part till it bleeds, and the Patient feels it, then apply scalding hot Stupes for half an Hour, wrung out of a strong Fomentation, wherein is put a quantity of *S. V.* or Brandy; and to the Scarifications apply either *Ol. Terebinth.* scalding hot, or *Spir. vin. & Ægyptiac.* and dress it twice a Day, till the Mortification stops, the Sloughs separate, and the Scarifications digest; then mundifie, incarn and siccatrize, as in other Cases.

CHAP.

CHAP. XLIX.

Of Fractures in general and Particular.

Q. *What is a* Fracture?

A. It is a *Solution of Unity* in a Bone, ariſing from ſome violent external Cauſe; it is called in Greek Κάταγμα.

Q. *How is a Fracture made?*

A. Three ways; (*viz.*) (1.) *Tranſverſe*, as when a Stick is broke ſhort off. (2.) *Streight*, when the Bone is ſplit up and down like a Plank. (3.) *Oblique*, when it is compounded of both the former.

Q. *How will you know when a Bone is fractur'd?*

A. (1.) By the crackling of the Bones as you handle the part. (2.) By the violent Pain in the part, if it be handled. (3.) Commonly there is a prominence or bunching out. (4.) The Limb is without ſtrength, and uſeleſs, and ſometimes there is a ſhortneſs in it; but theſe are Signs attending the *Tranſverſe* and *Oblique* Fracture only.

Q. *How will you know when it is* ſplit length-ways?

A. The Part is *thicker* than naturally it ſhould be, with Pain and Unevenneſs, *&c.*

Q. *How many ſorts of Fractures are there?*

A. Two, (*viz.*) *Simple* and *Compound*; the one is without a Wound, and the other ever attended with one.

Q. *Which are attended with moſt danger?*

A. The Compound ones *without diſpute*, and thoſe again in the great Bones, and near the Joynts.

Q. *How*

Q. *How many Intentions of Cure are there in a ſimple Fracture?*

A. Five, (*viz.*) (1.) To put the fractur'd Bones exactly together again; which is done by Extenſion and Reduction. (2.) To keep the Parts ſo put together in their right places. (3.) To manage the Cure as it ought. (4.) To endeavour to breed a Callus. (5.) To correct ill Accidents.

Q. *What damage comes by not making right Extenſion?*

A. If it be more violent than it ſhould, it cauſes Feavers, Pain and Convulſions, and ſometimes Palſies; and if it be leſs than it ſhould, the Shivers of Bone will rub one againſt another, and break, and ſo by their pricking on the *Nervous Parts* cauſe Pain; but the bigger the Bone, the more violent Extenſion ought to be

Q. *How is the Operation to be performed?*

A. Either by the *Surgeons Hand alone*, (as in young Children) or by *Pullies*, as in very ſtrong Bodies, or where the Fracture has remained long unreduced; or by two Aſſiſtants, the one holding the upper, and the other the lower Part of the Limb, and ſo making due Extenſion, till the Surgeon with his Hands, gently and exactly reduces the fractur'd Bones.

Q. *How will you know when the Bone is well reduced?*

A. If compared with the ſound Limb, it be found to be uniform with it; or if no Hollowneſs nor Inequality remain in the Part, and if Pain be abated, theſe are all good and certain Signs.

Q. *How are the Parts of the broken Bone to be kept united?*

A. Having reduced the Fracture, apply all round it, either *Empl. è bolo.* or *Bol. ver. & poſca*, made into the form of a *Liniment*, and ſpread up-

on a ſoft Cloth; which ſimple Compoſition alone is of more Effect to eaſe Pain, prevent Inflammation and a Flux of Humors to the Part, than any Medicine whatſoever that I ever yet met with, however pompous the Title may be; then with a Linnen Roller dipt in *poſca*, take three or four Turns round the Fracture, and from thence roll upwards as far as you ſee convenient, and ſo downwards again to the Fracture; then to that part of the Fracture which bunched out, apply a Boulſter dipped in *poſca*, and then with a double-headed Roller, take a Turn or two about the Fracture, and ſo paſs one part upwards and the other downwards, till you have ſpent it all; and then round the Limb, (with three pieces of Tape) tie (pretty hard on) as many Splints of good Paſt-board, armed at the Ends, as will compaſs the Part; and then bleed the Patient, and lay him in his Bed, as eaſie as you can, and his Leg in a Caſe, made for that Purpoſe, to keep it firm, and every thing hollow from it; keep his Body ſoluble, and him to a ſpare Diet.

Q. *How will you know if the Bandage be good?*

A. (1.) By the Patient's Eaſe. (2.) If the next day a looſe ſmall Tumor appear in the extream part, the Bandage is good; and on the contrary, if no Swelling appear, or a great and hard one, it is bad; for the firſt ſhews that the Fracture is not kept ſo hard rolled as it ought, and the latter cauſes Inflammation.

Q. *When are Dreſſings to be taken off?*

A. Not till the ſeventh Day, except you ſee abſolute Neceſſity.

Q. *How is it* then *to be managed?*

A. If you find all things well, embrocate with *Ol. Roſar.* and apply a Cerecloth, *Ex Empl. Diapal. ad herniam & paracelſ.* and roll it up as at firſt; only

only firſt remember, that if it is poſſeſſed with a *troubleſome Itching*, let it be bathed in warm Water; by which Method, the *Tone* of the part will be *preſerved*, and the Subſtance of the Bone kept ſound, if rightly followed.

Q. *When do you endeavour to breed* Callus?

A. About the ſeventh Day.

Q. *Of what is* Callus *bred*?

A. Of the Nouriſhment of the Bone, ouzing out of the Edges of the Fracture, which grows hard about the fractur'd Ends; and though it is not Bone, yet it is ſo hard, that it will ſooner break in any other part, than where the *Callus* is bread.

Q. *What are the Indications here*?

A. (1.) To ſupply fit Matter. (2.) To keep it from being waſhed away from the Edges of the Fracture.

Q. *How is fit Matter to be ſupplied*?

A. The Food muſt be thick and *viſcid*. Rice, Wheat, Feet and Heads of Calves and Sheep, and Neats, and that by degrees in a larger Latitude. Some give inwardly *Oſteocolla*; let your Applications be *implaſtick*, and your Bandage not too hard.

Q. *How will you know when Bandage is* leſs *or* greater *than it ſhould be*?

A. If it is leſs then it ſhould be, if you touch the part, little or no *Callus* is felt, and the Part is weak in Motion, *& è contra.*

Q. *How is want of* Callus *to be remedied*?

A. Greater Liberty in Diet muſt be allowed, the *Aſtringents* muſt be more gentle, the Bandage muſt be ſlackned, and the Part muſt be bathed with warm Water, till it looks red and ſwell; and if there is too much *Callus*, the contrary Courſe is to be taken.

Q. *Suppose that by over-streight Rolling, &c. the Limb grows small?*

A. The Patient must be nourished, and Plaisters of Pitch applied, and hastily pulled off again *several times* one after another, that the pulling off the Hair may cause Pain, and so attract Nourishment to the Part, and then pour warm Water upon it, *&c.*

Q. *Suppose that after the Fracture is cured, the Limb is not in its right Figure?*

A. If the Limb be not hurt in its Motion, or if the *Callus* be old, and the Patient weak, and old too, he must be satisfied without striving any further; but if he be Young and Strong, and the *Callus* new, the only way is to break the Fracture again.

Q. *How is that to be done?*

A. For several Days bath the Part with a Decoction of *Altheæ Malvæ*, &c. boiled in Neats Foot broth, and apply *Empl. E. Cituta, cum auxung. porcin.* and then with Strength of Hand, break the Bone again, (laying it upon some hollow place) then reduce it as it ought, and cure it as other Fractures.

Q. *Tell me how* particular *Fractures are to be reduced?*

A. The Operation is so alike in all Fractures, that it is almost needless to mention Particulars; however take these few Instructions. If the *Clavicle* or Coller-bone be broke, let an Assistant stand behind the Patient, and take hold of both his Shoulders, and pull them *back*, whilst he presses with his Knee between the two *Scapula's forwards*, and then you may easily reduce it with your Hands. If a *Rib* be broke, the Patient must be laid thwart a Cask, or some other thin convex thing, with his well Side downwards. And if the *Os femoris* or

Thigh-

Thigh-bone be broke, take care you are not deceived, for the Bone is naturally Crooked in all, as may be seen in every *Skeleton*; and the part being very fleshy, the Bone is with difficulty kept in its place.

Q. *Suppose the* Patella *or Knee-pan be fractur'd?*

A. This seldom happens; but if you meet with such an Accident, and it be broke *transverse*, a Lameness will attend the Patient so long as he lives; but if the Fracture be right up and down, not so, (if it be well managed;) and the reason is plain, for if the Fracture is transverse, the 7th, 8th, and 9th Muscles drawing upwards, and the Tendon inserted in the *Patella* drawing downwards, it is almost impossible that the *Patella* should ever be joyn'd as it ought; but in a Fracture there, *right up and down*, the Ends of the 7th, 8th, and 9th Muscles that move the Leg, meeting about the *Patella*, and ending in a strong *Tendon*, which involving the *Patella*, the Fracture is apt to close of it self, and so remain. However, if either of them happens, use all your Art to reduce it, and by Boulsters and good Bandage to keep it in its place, and cure it as other Fractures, *&c.*

CHAP. L.

Of a Compound Fracture.

Q. *HOW is a Compound Fracture to be managed, where neither the Bone is made bare, nor do we look for any Piece of Bone to come away?*

A. First reduce the Fracture as is before taught. (2.) Bring the Lips of the Wound together, and ſtitch them. (3.) To all the Fracture apply *Aſtringents* and *Glutinatives*; and to the Wound, if there is no Bleeding, only a Pledget dipt in *vin. Rub. & ol. Roſar.* and over that the 9 or 15 *tailed Bandage*, whoſe Ends are to lay over one another on the Wound, and be pulled indifferent tight; then over that, Slips of Linnen Cloth, *ſix or eight double*, laid right up and down at about a Finger's breadth diſtance one from another, quite round the Limb, except upon the Wound; and over every one of them, Splints of Paſtboard tied on with three Tapes, one above and the other below the Wound, and the third ſo contrived that the Wound may be dreſt without untying the other two, or moving the Limb; and this muſt be tied not any ways hard; then if need be, Bleed, keep the Patient to a thin Diet, and his Body ſoluble; dreſs the Wound every Day, digeſt, mundifie, incarn, *&c.* as in other Wounds.

Q. *Suppoſe the Bone is not made bare, yet we look for a Piece of the Bone to come away?*

A. (1.) If any Piece be looſe in the Wound, take it away immediately; but if it ſticks faſt, uſe no violence to it. (2.) Give free diſcharge to the Matter, and let not the Bandage be too hard.

(3.)

(3.) Dip all the Bandages in *vin. Rub. & ol. Roſ.*

(4.) When the Inflammation is over, uſe all your Endeavours, that the Bone may be thruſt forth, which Nature will in time do, but it may be helped by Medicines, as *Cera Citr. Euphorb. Rad. Ariſtol.* or *tinct. Mirrh,* &c.

Q. *But ſuppoſe the Bone be made bare?*

A. If no Pieces are ſeparated, reduce it and defend it from the Air, and proceed as before taught, (in a Compound Fracture where the Bone is not made bare) only remember, not to uſe any Oily or Fat Applications, *&c.*

Q. *Suppoſe the Ends of the two Bones lie over one another, ſo that you cannot by any means reduce them?*

A. Then you are to ſaw off one of the Ends, and reduce them, and proceed as is already directed.

Q. *How will you do if a Mortification ſeizes the part?*

A. Take off all the Dreſſings, Scarifie, and apply hot Stupes, and proceed as I before taught in Chap. XLVIII.

CHAP. LI.

Of Diſlocations in General.

Q. *What is a* Diſlocation?

A. Diſlocation, Luxation, or ſlipping out of Joynt, is when the Head of ſome Bone is forced out of its own proper *Sinus* into another place.

Q. *How many ſorts of Diſlocations are there?*

A. Three, (1.) When Bones are ſeparate and gape, which before were joyned, as when the *Scapula* parts from the *Humerus,* or the *Radius* from the *Ulna,* or the *Tibia* from the *Fibula.* (2.) When Bones are lengthened, through Laxity of the Ligaments, and then the Head of the Bone ſtarts a little out of its place, and is eaſily reduced. And, (3.) When the Bone is wholly out of its place; and this is called a perfect Diſlocation.

Q. *What are the Signs of a perfect Diſlocation?*

A. (1.) Motion is loſt. (2.) An Hollowneſs appears from whence the Bone is ſlipt, and a Prominence on the contrary ſide of the Juncture. (3.) The Limb is generally ſhortned. (4.) That Limb is unlike the ſound one both in figure and ſite. (5.) There is joyned to all the former, *grievous Pain.*

Q. *What are the Signs of that Diſlocation where the Bones gape, or are ſeparated?*

A. (1.) The thickneſs of the Limb is more than it naturally ſhould be. And (2.) Where the Heads of the Bones meet, the thickneſs is much greater.

Q. *What are the Signs of that ſort of Luxation, when the Bones are lengthened?*

A. (1.)

A. (1.) The Limb hangs dangling and diſorderly, and turns any way. (7.) When the Bone is reduced, the Limb becomes of its natural length, and when it is let go, it immediately ſlips out again. (3.) There is a Cavity quite round the Joynt.

Q. *What are the Signs of a Diſlocation well reduced?*

A. (1.) It is known by the Patient's Eaſe. (2.) By the natural Figure of the Limb and Joynt, which if compared with the other, will be exactly like it. (3.) Motion is reſtored. And, (4.) The Head of the Bone generally *ſnaps* as it ſlips in.

Q. *How many Intentions of Cure are there in a Luxation?*

A. Four: (1.) Extenſion. (2.) Reduction. (3.) Bandage. (4.) To correct or keep off Accidents. The (1.) is performed by Aſſiſtants or Pullies. The (2.) by the Surgeon's Hand. The (3.) by handſome Rolling, Boulſters, *&c.* And the (4.) by fit Medicines, Bleeding, Purging, Diet, *&c.* Again, the (1.) moſt be done gently, for fear of Contuſion, and avoid twiſting about the Head of the Bone leaſt you break the Edge of its *Sinus.* The (2.) muſt be done ſpeedily and effectually at once. The (3.) muſt be done ſo as to keep the Limb in its right Poſture, and to prevent Inflammation. And the (4.) is done by *Aſtringents*, ſuch as are preſcribed in Fractures; and order every thing elſe according to Reaſon and Art.

Q. *Suppoſe the Diſlocation be old?*

A. (1.) Endeavour to ſoften and diſcuſs the Matter which is flowed into the Joynt, with *Diach. cum gummi*, or Compoſitions *ex Rad. Altheæ. fol. malv. far. lini. fenugræc. ol. oliv. auxung. porcin.* &c. having firſt well rubbed the Part; or hold the Limb often and long in a warm Bath, *&c.* and then proceed as in a new Diſlocation.

CHAP.

CHAP. LII.

Of particular Diſlocations.

Q. *WHat are the Signs of luxated Jaws?*

A. If they be luxated on both ſides, (1.) The whole Jaw appears prominent forwards. (2.) The Mouth cannot be ſhut. (3.) The lower Teeth ſtand out further than the upper. (4.) The Temporal Muſcles are ſtretched out *very tort* and *hard.*

Q. *How is it to be reduced?*

A. Put both your Thumbs (armed with double Boulſters) into the Patient's Mouth, and with your Fingers take hold of the outſide of his Chin, then force the Jaw-bone downwards, backwards and upwards, whilſt ſome Aſſiſtant all the while holds his Head ſteady; then anoint the temporal Muſcles with *ol. Roſar. & Lumbricor.* &c. and if need be, apply Aſtringents alſo; then roll up the Parts *decently*, bleed him, and for three or four Days keep him to Liquids only.

Q. *What are the Signs of a diſlocated Shoulder?*

A. It is in Figure very unlike the ſound Shoulder, having a Cavity on the top, and the Head of the Bone may be felt prominent in the *Axilla* or Armpit; the upper Proceſs of the *Scapula* appears ſharp; the Arm cannot be brought to the Ribs; and laſtly, it is longer than the other Arm, and attended with extream Pain. Thus far of the Signs of a Shoulder diſlocated downwards, which it moſt commonly is; and if it be luxated forwards, the Signs will be evident without any Direction.

Q. *How is the Shoulder to be reduced?*

A. Se-

A. Seven ſeveral ways; (*viz.*) (1.) By *Circumrotation*, when you or the Patient puts the Fiſt doubled under the Arm-pit, ſo that the middle Knuckles, may force the Bone into its place, whilſt with your other Hand you make moderate Extenſion, and keep the Bone in a circular Motion; but this is to be uſed only to Children and tender Bodies. (2.) Let the Patient ſit, then put your Head to the Patient's Shoulder, and your Fingers under his Arm-pits, and then your ſelf, or ſome ſtander-by, preſs the Patient's Elbow (with the Knee) towards his Ribs. (3.) Lay the Patient down upon the Floor, on which do you ſit down alſo, and take hold of the diſlocated Arm with both your Hands, and put your Heel under his Arm-pit, (having firſt placed a Ball there) and then let a Servant take hold of the oppoſite Arm, and draw it downwards; and another having a ſtrong Roller, (ſo broad as may take hold of the Ball) let him take hold of both its Heads, and draw them up towards the Patient's Head, and with his Foot preſs upon the Diſlocated Shoulder, by which the Head of the Bone will ſlip in. (4.) Let the Patient ſtand upon a Stool, and place his diſlocated Arm over a tall Man's Shoulder, who muſt hold the Arm faſt down before his own Breaſt, then let ſome one trip away the Stool, that the Patient's Weight may cauſe the Bone to ſnap in. (5.) Set the Patient near ſome Poſt, and let a Pole with a Prominence fixt in its middle, (which we call a *Colt-ſtaff*,) be held between two ſtrong Men, then let the Patient's Arm be put over the Pole, with the Prominence fixed cloſe to his Ribs, up cloſe to the Head of the Bone, then let your Aſſiſtant hold down his Arm, extending it very ſtrongly, and preſſing it towards his Ribs, or elſe with a Pully faſtned to the Poſt, and to his Arm above his Elbow,

bow, to make Extenſion that way, and then you muſt ſtand on the contrary ſide, with both your Hands on each ſide of the *Scapula*, to preſs it down, and to keep the Patient firm in his Seat, and govern the Operation. (6.) Over a Ladder, which is to be managed much as that over a Man's Shoulder. (7.) By the *Gloſſocomium* or Commander, which is to be uſed with Caution in tough Bodies, and where the Bone has been long out. Theſe are the moſt common ways now in uſe; this being done, apply your Dreſſings, place a good Boulſter under the Arm, and roll him up, and bleed him, and keep his Arm quiet, till the Joint gathers Strength, and that the Inflammation and Swelling are over.

Q. *Suppoſe a Diſlocation of the Shoulder, and a Fracture on the* Os humeri; *which would you reduce firſt? And why?*

A. I would reduce the Diſlocation firſt, becauſe if I did not, I ſhould diſplace the fractured Bones, by reducing the Diſlocation after the Fracture, and ſo cauſe new Work, and Pain to the Patient, and act inartificially and prepoſterouſly.

Q. *We will now diſcourſe of the luxated Elbow, pray tell me how many ways is the* Ulna *or Cubit luxated?*

A. Forward or backward, outward or inward, and ſometimes the *Radius* follows, and ſometimes it does not. If it be luxated forward, the Arm cannot be bent; the Cubit is ſhorter; a Tumor appears on the fore-part, and a Cavity behind; if backward, the contrary; and ſo if outward or inward, by the ſame Tumor and Cavity you may judge of it.

Q. *How is it to be reduced?*

A. If the Luxation be forwards, Extenſion muſt be made obliquely by two Aſſiſtants, then let a hard

hard Body of Linnen be placed on the inſide of the Joynt, and over that a Girt ſo long as that you may put your Foot into it; then whilſt they make *due Extenſion*, (by your Foot in the Girt, and by your Hands) bend it, and reduce it; or in tender Bodies it may be done by your Hands alone. If the Luxation be backwards or *recent*, it is eaſy to reduce by the Hand alone, if an *oblique Extenſion* be made very ſtrong. If it be ſlipt inwards or outwards, it is to be reduced the contrary way, then embrocate *cum ol. Roſar. & aceto*, and apply your Reſtrictives, make decent Bandage, place the Arm in a middle Poſture, bleed the Patient, keep him to a cooling Diet, and his Body ſoluble.

Q. *How many ways may the* Carpus, *or Wriſt, be Diſlocated?*

A. Inward, outward, forward and backwards, but commonly forward.

Q. *What are the Signs of this Luxation?*

A. A Tumor on the fore-part, and the Fingers cannot be bent; if it be backward, the Fingers cannot be extended; if it be inward or outward, a Tumor appears on one ſide, and a Cavity on the other.

Q. *How are theſe Luxations reduced?*

A. If the Luxation be either forward or backward, the Hand muſt be laid upon ſome Table, with the back downwards, if the Diſlocation be forwards; and if it be backwards, the contrary; then let good Extenſion be made, and with your Hand force the Bone into its place.

Q. *How are the luxated Bones of the* Carpus *and* Metacarpus *to be reduced?*

A. By a moderate Extenſion, laying the Hand on a Table, and ſome hard Subſtance put under it, *&c.* then apply fit Medicines, Rolling, *&c.* as has been taught.

Q. *How*

Q. *How many ways may a Thigh be diſlocated?*

A. Outwards, inwards, forwards and backwards, but oftenest inwards, becauſe there the Edge of the *Acetabulum* is loweſt, *&c.*

Q. *What are the Signs of* ſuch a Luxation?

A. If the Luxation be inwards, that Thigh appears longer than the other, and the Knee, Leg and Foot ſtands outwards, and a Tumor appears near the *Perinæum.* If the Luxation be outwards, the ſigns are contrary, that Leg is ſhorter; near the *Perinæum* there is an Hollowneſs, the Knee, Leg, and Foot, ſtand inwards, and the Heel cannot touch the Ground. If the Diſlocation be forwards, the Thigh cannot be bent, Urine is ſtopt, the Groins ſwell, and the Buttocks appear wrinkled. If it be diſlocated backwards, the Leg cannot be extended, that Thigh is ſhorter than the other, that Heel cannot touch the ground, the Groin appears looſe, and the Head of the Bone ſticks out backwards.

Q. *How is this Diſlocation to be reduced?*

A. It is with *great difficulty* that it is done, eſpecially if it has been long out of place, however if it be new and in tender Bodies, it may be reduced even with ſmall Extenſion ſometimes, if you ſuddenly bend the Thigh. (2.) Let an Aſſiſtant hold the Patient faſt by the Arm-pits, and another take hold of the Thigh above the Knee, with both his Hands, and make Extenſion, then do you with your Hands force in the Bone. (3.) Let a wooden Pin be drove into the Floor, then lay the Patient flat on his Back, with his Pin between his Legs, placed cloſe up to the Head of the Bone, with a thick hard Boulſter between them, then make faſt the contrary Leg and Thigh, and endeavour to keep his Body very ſteady, then apply a ſtrong ſoft Roller ſeveral times about

about the diſlocated Thigh, to which a Cord or Pully muſt be fixed, with its other End at ſome diſtance, then an Aſſiſtant muſt pull ſtrongly upon the Cord, to make Extenſion, whilſt you manage the Bone to reduce it with your Hands.

Q. *How many ways may the Knee be diſlocated?*

A. Outward, inward and backward.

Q. *What are the Signs of it?*

A. They are very evident. There is an unſual Tumor on one ſide, and a Cavity on the other, Motion is weakened, and the Figure is depraved.

Q. *How is it to be reduced?*

A. Let two Aſſiſtants make Extenſion, one above, and the other below the Knee, near the Foot; and you muſt at the ſame time force the Bone into its place, then dreſs and roll, as has been directed.

Q. *How many ways may the* Ancle *be luxated?*

A. Inward, outward, forward and backward.

Q. *What are the Signs of it?*

A. If it be Diſlocated inward, the ſole of the Foot turns outward; and if Diſlocated outward, it turns the contrary way: If forward, the broad Tendon of the Heel, called *Nervus Hectorius*, or *Tendo Achilles*, is very ſtiff and hard, and the Foot is leſs: If the Diſlocation be backwards, the Heel is almoſt hid, the ſole of the Foot ſeems bigger, and the Foot longer.

Q. *How is it to be reduced.*

A. By good Extenſion and Repoſition, and cured as other Luxations, only the Patient muſt there keep his Bed longer, (at leaſt 30 or 40 Days) otherwiſe the Joynt will ſlip out again upon every ſlight Occaſion; or at beſt, will be a long time weak, *&c.*

Q. *What*

Q. *What are thoſe which Surgeons call* Vulnerary Herbs?

A. Such as theſe, *Scabioſa, Sanicula, auric. Muris, tanaſet. verban. Symphit. Hiperic. Biſtort. tormentil. vinc. per vinc. Centaur. Min. Borag. Marrub. Betonic. valerian. alchimel. Card. ben. flor. Cordial. Egrimon. Oſmund. Regal. Scordium. ulmaria. tuſſilag. Hiperc. plantag. burſa. paſtoris*, &c. Out of which, Drinks are to be made, as occaſion offers.

CHAP. LIII.

Of Phlebotomy or Blood-letting.

Q. *WHat are the Uſe and Effects of Phlebotomy?*

A. By it the Blood is altered both in Quantity and Quality.

Q. *What Inconveniencies follow its too frequent uſe?*

A. The Blood thereby becomes *more ſulphureous* and *leſs ſalt*, and ſo diſpoſes Men to be both *feaveriſh* and *fat*.

Q. *That it gives Relief when Blood offends in* Quantity, *is plain; But how does Phlebotomy correct the Temperament of the Blood, when it offends in* Quality?

A. If any thing contrary to it be mixed with its Maſs, the Blood flowing out, upon a Vein being opened, carries much of that *foreign* Matter out with it, by which the reſt is more eaſily conquered and expelled; for the Orifice being once opened, Nature rallies all her Force to expel her Enemy; the fermenting Blood gathers together the

the *Heterogeneous Particles*, and excludes them with the firſt Blood that flows; from whence it is, that in breathing a Vein, the *firſt Porringer* of it ſhall be meer *Putrifaction*; the *ſecond* ſomething *better*; and the *third* very good Blood, as every Surgeon may obſerve.

Q. *Does Bleeding reſtore the Blood to its right Temperament, when it is declining from it?*

A. Yes; for when its Maſs, by the *Sulphur* or *fixed Salt* is exalted, and degenerates into a *ſaline Sulphureouſneſs*; ſome of it being let out, a new Fermentation immediately ariſes, and the *Sulphur* and *fixed Salt* being overcome, the Spirits recover their Dominion. And for this Reaſon, Phlebotomy is by ſome adminiſtred as well in the *beginning* of a Conſumption, Scurvy, and Jaundice, as in a Feaver.

Q. *Do all Diſtempers indicate Phlebotomy?*

A. No; if the mixture of the Blood becomes very bad, as in the Plague and malignant Feavers; or if the *Diſcraſy* of the Blood ſhall be ſuch, that the *Spirit*, *volatile Salt* and *Sulphur* ſhall be depreſſed, and the *terene* or *aqueous Particles* predominate, then the Blood ought to be preſerved, and not ſent out; wherefore in a [*confirmed*] *Conſumption*, *Chachexia*, *Dropſy*, &c. if you bleed, you murder the Patient.

Q. *From what part of the Body is it beſt to draw Blood?*

A. According to the Laws of *Circulation*, it ſhould ſeem not much to matter from what Part it be taken, ſo it be but large enough; yet it equally flowing from all Parts to the *Vena Mediana* of the Arm, we generally open that; notwithſtanding, (according to common Practice; but how rational that is, I dare not determine) if it ought to be called back from the ſuperior Part of the Body

to the inferior, (as when the *Menſtrua* or Hemorrhoids are ſuppreſſed) it is thought moſt proper to bleed in the Foot.

Q. *At what time of the Diſeaſe is Phlebotomy to be celebrated?*

A. At the *Beginning* or *Increaſe*, but hardly in the *State* or *Declination*,

Q. *Why?*

A. Becauſe at that time Nature is *buſie*, endeavouring a *Criſis*, and the Blood very much ferments, ſo that Nature ought not to be diſturbed. Beſides, at the height of the Diſeaſe, if Nature is *Conquereſs*, ſhe does not want this Relief; and if ſhe be overcome ſhe will not endure ſuch an Evacuation.

Q. *What Time of the Day is beſt for the Operation?*

A. When there is a Neceſſity, it may be done at any Hour of the Day or Night; or (otherwiſe) a Morning is rather to be choſen, when the Stomach is empty, and the Veſſels emptied by Sweat, the Blood quiet, and appearing free from any *ſerous Filth*; or it may be deferred till the new Juice of things eaten be paſſed into the Blood, for the Veſſels being emptied, are both apt to ſnatch the *crude Chile*, and what is diſagreeable to the Blood alſo, into themſelves.

Q. *What Quantity ought to be taken away?*

A. In a *burning Feaver*, *Pleuriſy*, *Peripneumonia*, *Quinzy*, *Appoplexy*, and other *grand Diſeaſes*, that have their Original from a *Phlegmonick Incurſion* of the Blood, if it be not taken in a large Quantity, it does more harm than good: And on the contrary, in weak and tender Conſtitutions, and in *Dropſies* and *Cachochimia*'s, it is not to be raſhly done; or if allowed for *particular Reaſons*, it muſt be in *ſmall Quantities*.

Q. *Is*

Q. *Is a* large *or* ſmall Orifice, *the moſt convenient?*

A. All Ingenious Men give their Votes for a large one.

Q. *Why ſo?*

A. Becauſe if it flows with a ſmall Stream, or *Drop by Drop*, the Maſs of Blood fermenting, will *ſeparate into Parts*, and what is more *Spiritous* will burſt out, whilſt the thicker remains behind; beſides an *Ecchimoſis* and Tumor, is apt to remain after it.

Q. *Wherein lies the danger in opening a Vein?*

A. In pricking an Artery or a Tendon.

Q. *How ſhall we know how to avoid it?*

A. In opening the *Jugular Vein*, or the *Vena Cephallica*, there is no Danger, except a Man is mad, and will plunge in his Lancet without thought: But in the *Mediana* and *Baſilica* there is; for under or near the one lies a *Tendon*, and under the other an *Artery*.

Q. *What is a* Tendon?

A. It is a *ſimple Part*, diffuſed thro' the whole Body of a *Muſcle* lengthways, which in ſome part is united, and in ſome divided and ſtuffed with Fleſh; ſofter than a *Ligament*, and harder than a *Nerve*; it is the principal Part of a *Muſcle*, and the chief Inſtrument of Action.

Q. *What is an* Artery?

A. It is a *common Organ*, round, long, and hollow, conſiſting of a double Coat, proceeding from the Heart, fit to carry Blood and vital Spirits to all Parts.

Q. *What Signs follow a* Tendon *being pricked?*

A. Extream Pain, a Flux of Humors, a Mortification, Feaver, Ravings, and Convulſion.

Q. *What are the Signs of an* Artery *wounded?*

A. The Blood is very florid, it flies out impetuously, by leaps and ſpurts, and will not ſtop, nor ſuffer the Orifice to heal.

Q. *How are the Hurts of theſe remedied?*

A. With great Difficulty; but as to the particular Cure, ſee *Chap.* 45. as to the Hurts of a *Tendon*: But if an *Artery* be punctur'd, Ligature is to be made above the Puncture, and the ſuperficial Parts carefully divided, to come at the *Artery*, and then by paſſing a Silver Hook or Needle under it, Ligature is to be made, both above and below, and divide the *Artery* at the Puncture, and the two Ends will in ſome time digeſt off, and the Wound may be cured as other Wounds. All other Ways by Aſtringents, or by the actual or potential Cautery, are more dangerous, and precarious; tho' if *this* cannot be done, *thoſe* may, ſome of them, be attempted; for it muſt be done, one way or other, or the Patient will looſe his Life or Limb.

Q. *Why is ſo ſmall a thing as the Puncture of an* Artery *of ſuch difficult Cure, when that of a Vein heals of it ſelf?*

A. Not that the Coats of an Artery are more Nervous than thoſe of a Vein, but becauſe an Artery (like the Heart it ſelf,) ought conſtantly to ſhake and beat; its Fibres repeating perpetual *Syſtole* and *Diaſtole*, wherefore a ſmall Puncture being made in its Pipe, by reaſon of the continual Motion of the Veſſel, and the *Efflux* of Blood, it remains very often incurable, or at beſt, of very difficult cure.

CHAP.

CHAP. LIV.

Of Veſiccatories or Bliſters.

Q. *HOW do Veſiccatories, or Bliſtering Medicines operate?*

A. The manner how *potential Fires* operate, is beſt found out by inquiring how *actual Fire* does raiſe a Bliſter; of which it is obſervable, that the *fiery Particles*, being not too vehemently applied, penetrating the *Cuticula*, without Solution of Unity, enter under the *Cutis* it ſelf, where the ends of the *Blood-bringing Veſſels*, and of the Nerves, and nervous Fibres, are terminated, and there do variouſly twiſt together theſe, altering their Poſition, and perverting the Structure of the whole Texture of the Skin; inſomuch that from the Veſſels being made angry, the watry Humor being mixed with fiery Particles, and therefore rejected both by the Blood and nervous Juice, is ſpued out in great Quantities. Now this *Limpha*, becauſe it cannot paſs thro' the *Cuticula*, ſeparates it from the *Cutis*, and raiſes it into that *bladdery Form* which we call a *Bliſter*. So *Cantharides* being applied to a part, and heated by its *Effluvia*'s, and ſo provoked to *exert* their *poyſonous Energy*, do abundantly diſpatch out fiery Particles, which penetrate the *Cuticula* without any laceration; they are thrown upon the Skin, where they firſt act upon the Spirits, and then upon the Humors and ſolid Parts; they diſſolve the Humors, *excite* painful Convulſions of the *Fibres*; and the Humors being diſſolved, are conſtrained to ſeparate into Parts; and its watery Part, which is tainted by

the venomous Particles of the *Cantharides*, is rejected by the other Juice, and *ſpued* out between the *Cutis* and *Cuticula*, and ſo raiſes a Bliſter.

Q. *Why does Bliſtering often bring a heat and ſcalding in the Water, and ſometimes a* Dyſuria *or Strangury?*

A. The *ſerous Juice* cannot always bear all the ſharp Parts of the Medicine back the ſame way they entered, but ſometimes armed with ſome of its venomous Particles, flies back into the *Maſs of Blood*, and circulates with it, and is ejected thro' other *Emunctories*, and offends ſome tender Channels in its Paſſage; and amongſt the reſt, being ſeparated by the Kidneys, it hurts *them*, the Neck of the Bladder and urinary Paſſage, and corrodes the Parts, and ſo cauſes Pain in making Water, *&c.*

Q. *What gives Relief in that Caſe?*

A. Nothing better than a Decoction of Mallows, either in Milk or Water. Alſo *Camph.* ℈ſs in *Conſerv. Cynosbat*, once in three Hours, which Method will effect a Cure, altho' the Cantharides have been taken inwardly.

Q. *In what Diſeaſes are* Veſiccatories *profitable?*

A. In all *Cutaneous Diſtempers*, alſo in malignant Feavers, Head-ach, *Vertigo*, *Sopor*, in *Defluxions* of the Eyes, Noſe, Palate, or Lungs, *Convulſions*, *Epilepſy*, *Appoplexy*, *Lethargy*, &c.

Q. *In what Diſeaſes are they hurtful?*

A. Thoſe that are ſubject to the Stone, Gravel, or Strangury, find *Veſiccatories* very *vexatious*; wherefore they are *there* to be forbore, unleſs a very urgent Neceſſity indicate the contrary.

Q. *Why is it an ill ſign when they do not riſe as uſual?*

A. Becauſe it ſhews that the *Animal* Spirits are dejected or diminiſhed to a great degree; and *all*

the

the Art of Man cannot make them operate on a dead Body; from whence its plain, that when they do operate, do it upon the Spirits; wherefore when a good Vesiccatory is applied, and no Blister arises, we have Reason to fear that they are *exhausted*, and so consequently *Death at hand*; yet *this Rule is not without its Exceptions.*

Q. *Our common way of strowing the Powder of the Fly, over the common Plaister, sometimes causes many small Blisters round about, and a very little or no Blister where it ought to be, to the vexation of the Patient, and scandal of the Surgeon; Is there no way to compose a Vesiccatory Plaister, that will stick, and do its Office, without strowing it over with Powder of the Flyes?*

A. Yes; I here give you a *Recipe* that never fails, if the Materials are good.

℞ *Resin. clar.* ℔ iiss *Cer. flav.* ʒvi *sev. pro Empl. Mellilot.* ℔j *pec. Burgundi* ʒxx *pulv. Cantharid. select.* ℔ij *Ms & fiat Empl.* S. A.

This you may depend on without adding fresh Flies.

CHAP. LV.

Of Fontanels or Issues.

Q. *IN what Parts are Issues generally ordered to be made?*

A. If it be for a general Evacuation of Humors from the whole Body, let it be made in the *left Arm*; or if it be for *Revulsion* from some particular Member, make it *far distant* from the *Part affect-*

affected ; or if it be for *Evacuation* from ſome particular Member, make it near the Part affected.

Q. *In what* particular Parts *of the Body, and for the Cure of what* Diſeaſes, *are Iſſues generally made* ?

A. Some for evacuating Humors out of the Brain, preſcribe one on the *Coronal Suture* ; or in the forepart of the Head over the *Sagital Suture* ; on in the hinder-part of the Head about the beginning of the *Lambdoides* ; ſome make it in the *Nape* of the Neck ; ſome on either ſide the *Spine*, or between the Shoulders, or behind the Ears. Iſſues in the *Back* are accounted helpful in *Gouts*, *Stone*, and *Cholick*, by evacuating the Matter that feeds them ; thoſe between the Shoulders on the Arm and Thigh, help *pectoral Diſeaſes* ; and (they ſay) one made *between* the *Ribs*, helps a *Conſumption* ; they are made in the *Groin* for Weakneſs of the Loyns, and to cure *rebellious Sciatica's* ; ſometimes they are made on the Thigh ; but it is far better to make them on the inſide of the Leg, a little below the Knee.

Q *In what part of the Member is an Iſſue moſt ſafely cut* ?

A. Not in the Body of a *Muſcle*, but in the diſtance between them, becauſe of the *Tendons* which the Pea preſſing upon, may cauſe Pain, Inflammation, Feaver, and worſe Accidents ; wherefore let it be made clear of all large Veſſels and *Tendons*.

Q. *How are they to be made* ?

A. Either by *Inciſion* or *Cauſtick*, about both which it is needleſs to ſay any thing, the operation is ſo common.

Q *In what Diſeaſes do they principally prevail* ?

A. In almoſt *every* Diſeaſe in the *Head*, outward or inward ; *Convulſion*, *ſore Eyes*, *King's Evil*, *Head-ach*, *Cramp*, *Cough*, and *conſumptive Spitting*,

an

an *Asthma*, and in *Hypocondriac*, *Histerick* and *Cachectical* Cases.

Q. *Suppose an Inflammation seizes it, how is it to be got off?*

A. By emollient Fomentations and Cataplasms, such as is before prescribed; also evacuate by bleeding and purging, and keep the Patient to a slender Diet.

Q. *But if it runs too much, a* thin, stinking, discoloured, icherous Matter, *how is this to be remedied?*

A. Let the Patient use a *regular Course* of Diet, without any Excess; let him avoid small Wines, and Cyder, and all *acid Liquors*; let the Issue be kept *very clean*, and dressed twice a Day.

Q. *But what if it tends to Putrifaction?*

A. Then in the room of a Pea, make a *Pill* of *Virgins Wax* incorporated *cum Santal. Rub. & virid. Æris*, and put it in, and use a Fomentation twice a Day, *&c.* or dissolve *vit. Rom.* ℥j *in aq; font.* ℥viij, in which put a quantity of common Peas, and let them lye a Night, then take them out, and dry them well, and use them as other Peas; and these (as I am told) are much used in our Hospitals, at this Day.

Q. *But if it grows dry, and will not run, what will you do?*

A. Then I would use a *Pea* armed with *Epispastick Plaister*; or *Peas* of *Box*; or of *Hermodactils* alone, which is excellent.

Q. *What Humors do they evacuate?*

A. All those gathered within the Pores of the Skin, or Glands, or brought thither by the *Arteries* or *Nerves*, have their Conflux to Issues, and not only so, but the *serous Recrements* under the Skin, which are wont to be transferr'd, or creep between the *Interstices of the Muscles*, or Membranes from

from place to place, have their Paſſage out at the Fontanel alſo.

Q. *Here has been a great Noiſe about Dr.* C——ch's *vulnerary Powder, which ſtops all Hemorrhages, and cures Wounds almoſt miraculouſly: Alſo the famous Stiptick Water, prepared by our great Oculiſt, Sir* Neither-Write-nor-READ. *And the celebrated Salt of Lemons. Pray what is your Opinion of them, and how do you think they are prepared?*

A. As to the vulnerary Powder, it is certainly a very good Medicine; and according to the following *Recipe* I have prepared it, and find it even the ſame with the Original: And which I ſhall here communicate.

℞. *Limatur Martis q. v. affunde ol. vitriol. ad trium digitorum ſupereminentiam, poſt Ebullitionem filtretur. Hujus Olei p. 1. Sacc. Saturni. p. 2. ſimul ad ſiccitai, Evaporentur; pulv. qui relict. eſt, Spir. vin. Rect. deflagrentur & deinde ſervetur ad uſum.*

The Uſe and its wonderful Effects may be found in the Doctor's Printed Book.

As to the *Stiptick*, I take it to be but a very indifferent Medicine; but ſuch as it is, I here ſhall communicate the Preſcription, being very ſure, that it is the ſame with the Original, as any Perſon may find by comparing them together, (*viz.*)

℞. *Aq; font. Cong.* j *allum. Com.* ℔j *Alloes opt.* ℥j *Cochinel. pulv. ſubtilliſſ.* ℥j *coq; ſem hor. & filtretur.*

This Medicine may be of uſe inwardly, to reſtrain Fluxes of Blood, either by Urine or otherwiſe; but that it is of ſuch external uſe as the Gazzett has formerly made us believe, no wiſe Man can ſuppoſe.

As

As to the Salt of Lemons, every Chymiſt knows, that Lemons afford ſo little Salt, that the very Pretence of ſelling it at a moderate Price, ſhews it to be a meer Trick. However what is called the Purging Salt of Lemons, I here give you the *Recipe* of; and is certainly a pretty Cathartick.

℞. *Tart. vitriolat.* ℔j *Rezin. jallap.* ℥ij *Spir. vel Eſſentiæ limon.* ℥ſſ. *miſce,* S. A. Powder what is to be powdered; and mix them with the Spirit, or Eſſence, and keep them in a cloſe Box from Air. Doſe ℥ſs or ℈ij *plus minus.*

The End of the Chirurgical Part.

CHAP.

CHAP. LVI.

Of the moſt Principal Things neceſſary to be firſt known and underſtood in Anatomy, by every young Surgeon.

Q. *What is* Anatomy ?

A. It is an artificial Diſſection of the Body, in order to know its Parts ; and is divided into *Oſteology* and *Sarcology*.

Q. *What is* Oſteology ?

A. It is that part of it which treats of the Bones, Cartilages, *&c.*

Q. *What is* Sarcology ?

A. It is that part of it which treats of the Fleſh and the ſoft Parts ; and is divided into *Splanchnology*, *Myology*, and *Angeiology*.

Q. *What is* Splanchnology ?

A. It is that part which deſcribes the internal Parts, eſpecially the *Viſcera*.

Q. *What is* Myology ?

A. It is a deſcription of the Muſcles.

Q. *What is* Angeiology ?

A. A deſcription of the Nerves, Veins, Arteries and limphaduct Veſſels.

Q. *What is a Bone* ?

A. It

A. It is a *similar* part, dry, cold, hard, inflexible and insensible, giving strength and form to the whole Body.

Q. *What is a* Cartilage *or* Gristle *?*

A. It is a similer part, cold, dry, flexible, *but insensible,* and not so hard as a Bone, except by Age it degenerates; it has neither Membrane, Nerve, Cavity, nor Marrow, but they have a *mucosity* that preserves them flexible; their use is, to cover or line the Bones in their articulations for their easier Motion.

Q. *What is a Nerve ?*

A. They are the Organs of Sence, long, round, white Bodies, covered with two Membranes, made of the *Dura* and *Pia Mater,* composed of Fibres, springing from the Cortical part of the Brain and *Cerebellum.*

Q. *What is a Tendon ?*

A. It is a similar part, of a *peculiar kind,* diffused through the whole Body of a Muscle *lengthways,* which in some part is united, and in some divided and filled with Flesh, but mostly possessing the Head and Tail of the Muscle, yet only in such as have Bones to move; it is softer than a Ligament, and harder than a Nerve; or *it is a Prolongation of the Fibres freed from the Parenchima, and cloathed with the investing Membrane of the Muscles.*

Q. *What is a Muscle?*

A. It is an *Organical part,* and is a Texture of Fibres, consisting of Nerves, Arteries, Veins, and Limphatick Vessels, and is the Author of voluntary Motion. It is called Μῦς, a Mouse; either because it resembles a flead Mouse, or else from Μύω, to contract, which is the action of a Muscle.

Q. *What*

Q. *What are the Arteries?*

A. They are long, round, hollow Veſſels, conſiſting of four Coats, commencing from the left Ventricle of the Heart, where they receive the Blood that they diſtribute to all the Parts of the Body.

Q. *What are the Veins?*

A. They are Membranous Conduits, conſiſting of four Coats, which receive the Blood from all Parts of the Body, in order to convey it back to the Heart.

Q. *What is a Ligament?*

A. It is a ſolid and white Subſtance, ſofter than a Griſtle, and harder than a Nerve; being of a middle Nature between a Cartilage and a Membrane; its uſe is to tie the Parts of the Body together, chiefly the Bones.

Q. *What is a* Fibre?

A. It is a Body like a Thread; ſlender, *tenacious* and *irritable*, made for the ſake of Strength and Motion.

Q. *How many Bones are there in the whole Body?*

A. Our Moderns *generally* reckon 249.

Q. *As how?*

A. In the Cranium ——— 14
In the Face (reckoning the *Os Hyoides*) ——— 46
In the Trunk ——— 67
viz. in the Spine 32, in the Breaſt 29, and the ſix *Oſſa innominata*, (*viz.*) the 2 *Iſchia*, the 2 *Ilia*, and the *Oſſa pubis*.
In the Arms and Hands ——— 62
In the Legs and Feet ——— 60

In all 249

Q. *How are the Bones joined together?*

A. Either by Articulation or *Symphiſis*.

Q. *What*

Q. *What is Articulation?*

A. It is the natural conjunction of two Bones touching one another by their Extremities; there are two kinds of it, *viz. Diarthrosis* and *Synarthrosis.*

Q. *What is* Diarthrosis?

A. It is an Articulation, in which the Motion is manifest; and is divided into (1.) *Enarthrosis.* (2) *Arthrodia.* (3.) *Ginglimus.*

Q. *What are they?*

A. Enarthrosis is when a large and long Head is received into a deep Cavity, as the Head of the *Os femoris* into the Cavity of the *Os innominatum. Arthrodia* is when a superficial Cavity receives a flat Head, as when the Head of the *Humerus* is received into the *glenoide Cavity* of the *Scapula*; or the Heads of the *Metacarpus* or *Metatarsus* into the Cavities of the first *Phalanx*, or rank of the Bones of the Fingers, *&c. Ginglimus* is an Articulation in which two Bones do mutually receive one another, as the Bone of the *Carpus* which is received into that of the *Os Cubiti*, and the *Os Cubiti* into that of the *Carpus.*

Q. *What is* Synarthrosis?

A. It is an Articulation so strong and firm, that it has no distinct Motion; and is divided into *Sutura, Harmonia,* and *Gomphosis.*

Q. *What are they?*

A. Sutura or Suture, is when two Bones are joyned together, like the Teeth of two Saws; and this is only in Bones of the Scull. *Harmonia* is an Articulation, wherein the Bones are joyned in a *simple Streight Line*, or a *Circular*; as the Bones of the Face, Nose and Palate. *Gomphosis* is a compact Articulation, when one Bone is sunk or driven into another, like a Nail into a

piece

piece of Wood; and thus the Teeth are faſtned into their Sockets.

Q. *What is* Symphiſis?

A. It is either with ſome intermediate Subſtance, or without it; that without it is like a Tree and its Graft, and thus nature by hardening the Bones of the lower Jaw, and the *Epiphiſis* belonging to it, does ſo joyn them, that they make one continued Body. *Symphiſis*, with ſome intervening Body, is divided into (1.) *Synneuroſis.* (2.) *Syſarcoſis.* (3.) *Synchondroſis.*

Q. *What are they?*

A. Synneuroſis, is when Bones are united by means of intervening Ligaments, as in the Articulation of the *Rotula* with the *Tibia*. *Syſarcoſis*, is when Bones are joyned by means of Fleſh, as the *Os Hyoides* with the adjacent Parts, *&c.* *Synchondroſis*, is when Bones are united by a Cartilage, as the two Bones of the *Os Pubis*, &c.

Q. *Are there no other Kinds of Articulation?*

A. Yes; the Articulation of the Ribs with the *Vertebræ* of the Back, and the Bones of the *Carpus* and *Tarſus*, one amongſt another, and that is called *Amphiarthroſis*; and there are ſome others of leſſer moment, which I ſhall omit for Brevity's ſake.

Q. *What is an* Apophyſis *of a Bone?*

A. It is a Protuberance, which riſes on the Superficies of the Bone, with which it has the very ſame Continuity; and ſuch is the Prominence you ſee on the *Os Petroſum*, called *Apophyſis Maſtoides.*

Q. *What is an* Epiphiſis *of a Bone?*

A. It is an Appendage, or additional Bone, joyned to the principal by a ſimple Contiguity; and ſuch is the Prominence you ſee on the *Os Tarſi*: Its uſe is (1.) to ſtrengthen the Articulation;

on ; and (2.) to insert divers Muscles and Ligaments.

Q. *Has every Bone its* Epiphisis ?

A. No ; the lower Mandible has none of them, the Ribs have each of them one ; the Bones of the Leg and of the Arm have each of them two ; those of the *Os ilium* three ; those of the *femur*, four ; and each *Vertebra* five of them ; in Infants they are Cartilaginous, but harden as Years advance, till about the 20th Year they convert into Bone.

Q. *How are the Bones nourished ?*

A. By Blood ; though the Marrow does serve to moisten them, as the Fat does other Parts ; they all contain a Marrow, yet they want Sence, though they are all (except the Teeth) cover'd with their *Periosteum*, which is very sensible, being a thin, *nervous Membrane.*

Q. *What is the Spine ?*

A. It contains all the Bones from the first *Vertebra* of the Neck (called *Atlas*), unto the *Coccix* or Rump-bone.

Q. *How are the* Vertebræ *divided ?*

A. The Neck has 7, the Back 12, and the Loyns 5, in all 24.

Q. *How many Ribs are there in the Body ?*

A. They are in number 24, (*viz.*) 12 on each side ; the 7 Superior are called *true*, and the 5 Inferior *false*, or short Ribs.

Q. *How many Teeth has a full grown Person ?*

A. 16 in each Jaw, in all 32 ; and consist of three sorts, (*viz.*) (1.) *Incisores* or Cutters, and are those which we call the *Foreteeth* ; each Jaw has four of them, and they have but one *Phang* apiece. (2.) *Canini* or Dog-Teeth, they are in number four ; in each Jaw there are two, at each side of the Cutters one ; they are otherwise called

Eye-Teeth, and have but ſingle *Phangs*. (3.) *Molares* or Grinders, becauſe like Mill-ſtones they grind the Meat; they are in number 20, (*viz.*) 5 on each ſide of each Jaw, the two foremoſt have but two *Phangs* at moſt, but the others commonly three or four.

Q. *Name the Sutures.*

A. They are the *Coronal*, *Lambdoidal*, and *Sagittal*. The *Coronal* Suture extends from one Temple to another, and joyns the *Os frontis* with the two Bones of the *Sinciput* or Forepart of the Head. The *Lambdoidal* Suture is ſo called, becauſe it is made like the Greek Letter Λ; it is oppoſite to the former, and unites the *Os occipitis* with the two Bones of the *Sinciput* behind. The *Sagittal* Suture is plac'd on the Superiour part of the Head, and goes from the *Coronal* to the *Lambdoidal*.

Q. *How many ſorts of Hurts, is the Scull ſubject to?*

A. (1.) *Depreſſio*, a Depreſſion.
(2.) *Concameratio*, Avaulting. } Called Compound Fractures in *Cranio*.
(3.) *Exciſſio*, a part cut away. }
(4.) *Fractura*, a Fracture in a ſtrict Senſe, where both Tables are broke.
(5.) *Sedes*, or the print of the Weapon wounding. } Commonly termed Simple Fractures in *Cranio*.
(6.) *Rima*, *Fiſſura*, or Chink. }
(7.) *Contuſio*, a Contuſion. }
(8.) *Diſſolution* of a *Suture*, (*viz.*) when it gapes or ſeparates.
(9.) *Colliſion* of a *Suture*, (*viz.*) a Contuſion of its Brims.

(10.)

(10.) *Contra Fissura*, a Fissure in the opposite Part to that where the Blow was received.

Q. *What is the* Ulna *and* Radius, Tibia *and* Fibula?

A. They are the greater and lesser Bones, or *Fossiles* of the Arm and Leg.

Q. *What is the* Carpus?

A. It consists of eight Bones, and is scituated between the lower Articulation of the *Ulna* and *Metacarpus*.

Q. *What is the* Metacarpus?

A. It is that Part which is between the *Carpus* or Wrist, and Fingers, and is composed of 4 Bones.

Q. *What are the Bones which make the* Tarsus *or Instep?*

A. It consists of 7 Bones, (*viz.*) the *Astralagus*, *Calcaneum*, *Naviculare*, *Cuboides*, and the 3 *Cunieformia*.

The *Astralagus* (or *Talus*) has in its upper part a convex Head, which is articulated with the *Tibia* and *Fibula* by *Ginglymus*; its forepart, which is also convex, is received into the *Sinus* of the *Os Naviculare*: Below, towards the hind part of the under Side, it has a moderately large *Sinus*, which receives the upper and hinder part of the *Os Calcis*.

The *Os Calcaneus*, or *Calcis*, or the Heel-bone, lyes under the *Astralagus*, to which it is articulated by *Ginglymus*: Behind, it has a large Protuberance, which forms the Heel, and into which the *Tendo Achillis*, or large Tendon of the Heel, is incerted.

The *Os Naviculare* lies between the *Astralagus* and the 3 *Ossa Cunieformia*, and has its Name from the resemblance it bears to a Ship, and is there-

fore ſometimes called *Cymbiforme*, from its likeneſs to a Boat: Behind, it has a large *Sinus*; and before, it is convex, diſtinguiſhed into three Heads.

The *Cuboides*, or *Os Cubiforme*, is joyned *behind*, to the *Os Calcis*; *before*, to the two outer Bones of the *Metatarſus*; and on its *inſide*, to the third *Os Cunieforme*.

The *Oſſa Cunieformia*, are ſo called from their Wedge-like Shape, and lye all three at the ſide of one another: The *inmoſt* is the *largeſt*, and the *middlemoſt* is the *leaſt*; their *upper-ſide* is *convex*, and their *under*, *concave*; by that means hindering the Muſcles and Tendons of the Feet from harm, when we go.

Q. *What is the* Metatarſus?

A. All that part between the Inſtep and Toes, and conſiſts of 5 Bones.

Q. *What is properly called the* Thorax?

A. The *Thorax* or Breaſt, is the whole Cavity that reaches from the *Claviculæ* or Collar-bones, to the *Diaphragma*, or Midriff; it contains the Heart, Lungs, part of the Wind-pipe and Gullet, the *Arteria magna*, *Vena cava*, and *Ductus thoriacicus*.

Q. *How many Nerves are there in the whole Body?*

A. They are counted by Pairs, and in the whole there are 40 Pair of them; 10 Pair of which take their riſe from the *Medulla Oblongata*; and 30 from the *Medulla Spinalis*, which 30 make their egreſs by 60 Perforations in the Spaces between the *Vertebræ*; and though all have their exquiſite Sence communicated to them from the Brain, yet the Subſtance of the Brain it ſelf is *wholly inſenſible*, which is very amazing.

Q. *What is the* Cerebellum?

A. It

A. It is a marrowy windy Body, that lies under the Brain, in the lower and hinder part of the Head; its lower part is continuous with the Brain, but the upper is ſevered from it by the folds of the *Dura Mater.*

Q. *How many Muſcles are there in the whole Body?*

A. They are in number 434; thus, (*viz.*) in the Forehead 2, in the *Occiput* 2, the Eye-lids 6, the Eyes 12, the Noſe 7, the external Ears 8, the internal Ears 4, the Lips 13, the Tongue 8, the *Uvula* 4, the *Larinx* 14, the *Pharinx* 7, the *Os Hyoides* 10, the lower Jaw 12, the Head 14, the Neck 8, the Shoulder-blades 8, the Arms or Shoulder-bones 18, the *Ulnæ* 12, the *Radii* 8, the Wriſts 12, the Fingers 48, Reſpiration 57, the Loyns 6, the Abdomen 10, the Teſticles 2, the Bladder 1, the Yard 4, the *Anus* 3, the Thighs 30, the Legs 22, the Feet 18, the Toes 44.

Q. *What is the* Abdomen *?*

A. It is all that Cavity which extends from the Diaphragma to the *Os pubis.*

Q. *What are the 5 Pair of Muſcles of the Abdomen called?*

A. (1.) *Oblique deſcendens.* (2.) *Oblique aſcendens.* (3.) *Rectum.* (4.) *Piramidalis.* (5.) *Tranſverſalis.*

Q. *What is the* Linea Alba *?*

A. It is a concourſe of all the *Aponeuroſes* of the Muſcles of the Abdomen. It extends from the *Cartilago enſiformis* or *Xiphoides*, to the *Os pubis.*

Q. *What are the number and names of the Inteſtines or Guts.*

A. They conſiſt of three Coats, and are about 7 times the length of the Perſon; they are in Anatomy divided into ſix, (*viz.*) three ſmall, and

three great ones; the ſmall are the *Duodenum*, *Jejunum* and *Ilium*; the great ones are the *Cæcum*, *Colon* and *Rectum*.

Q. *Which is the* Epigaſtrick Region?

A. It is the ſuperior part of the *Abdomen*; it begins at the *Cartilago enſiformis*, and ends two Fingers breadth above the Navel; its middle part is called *Epigaſtrium*, which incloſes the ſmall Lobe of the Liver, part of the Stomach, with its inferior Orifice, and the middle part of the *Colon*.

Q. *What are the* Hypocondria?

A. The two ſides of the *Epigaſtrick Region*, are called the right and left Hypocondrium; the right contains the great Lobe of the Liver and Gall-bladder, and the left contains the greateſt part of the Stomach and Spleen.

Q. *Which is the* Umbilical Region?

A. It begins two Fingers breadth above the Navel, and ends two Fingers breadth below it; its middle part is called the Navel, and its two ſides the *Loyns*; the Navel includes the greateſt part of the *Jejunum* and *Meſentery*; the right Loyn contains the right Kidney, the *Cæcum* part of the *Jejunum* and *Colon*, and the left Loyn the left Kidney, and ſome part of the *Colon* and *Jejunum*.

Q. *Which is the* Hypogaſtrick Region?

A. It is called *Hypogaſtrium*; its ſides are the *Ilia* or Flanks, under it we find the *Rectum*, Bladder, and Matrix; the *Ilia* are ſo called, becauſe they contain the Gut *Ileum*; the *Hypogaſtrium* is divided into the *Pubis* and Groins.

Q. *What are the* Venæ Lacteæ?

A. They are ſlender *pellucid* Veſſels, having but one Coat, ſent in vaſt Numbers thro' the *Meſentery*, their uſe is to carry the *Chile* from the ſmall Guts

to

to the veſicular Glands of the *Meſentery*, and ſo to the *Receptaculum Chili*; they are of two ſorts, and called *primi & ſecundi generis*.

Q. *What is the* Meſentery?

A. It is a membranous part which ties moſt of the Guts together, and keeps them from *tangling*; it has two proper, and one common Membrane; it contains Veins, Arteries, Nerves, *Limphaducts*, Glands, and *Venæ Lacteæ*.

Q. *What is the* Limpha?

A. It is a *fermentatious* Liquor, ſeparated from the ſerous part of the Blood in the *conglobate Glands*, impregnated with *volatile Salt*, and *ſulphurious Particles*; which when brought to the *vaſa Chilifera*, makes the *Chile* thinner, and apt to dilate eaſily in the Heart; and the ſame it does by the venous Blood in the Veins, if it is too thick. It differs from a *Serum*; for if ſet in a Spoon in the cool, it will turn to a Jelly. The *Limphaducts* are Veſſels long, hollow, ſmall and knotty, having many Valves, which ſuffer the *Limpha* to paſs to the *Chiliferous* Veſſels, (and ſome Veins) but hinder its return.

Q. *What is the* Larinx?

A. It is the Head of the Wind-pipe.

Q. *What is the* Pharinx?

A. Only the Orifice of the *Oeſophagus*, dilated to a great extent.

Q. *What is the* Epiglottis?

A. It is the 5th Cartilage of the *Larinx*, and ſerves like a Trap-Door to keep any thing from falling into it.

Q. *What is the* Spinalis Medulla, *and* Spinalis Oblongata?

A. The *Spinalis Medulla*, or Spinal Marrow, is only a Production and Continuation of the Brain; 'tis divided into two parts, one of which is lodg-

ed in the Brain, and is called *Medulla Oblongata*, and the other contained in the *Vertebræ*, which is properly called *Medulla Spinalis*. The *Medulla Oblongata* is of a Subſtance harder than the Brain; and the *Medulla Spinalis* more ſolid than *that*; being a Rope of *Nervous Fibres*, diſtributed to all the Parts of the Body, and gives them exquiſite Sence, and Motion; it has 3 Coats, one of which proceeds from the *Dura*, and the other from the *Pia Mater*.

Q. *Why has the Heart a Pulſation, and why is the Blood Red?*

A. No (ſatisfactory) Reaſon (that we know of) can be given for either of them, but the Will of the great Creator. Not but Attempts have been made by Men of ready Inventions; which may be ſeen in a Treatiſe of ours, lately publiſhed, called, *Mechanical Eſſaies, explicating the Animal Oeconomy*, &c. a Book of great uſe to all Young Practitioners. Printed for *A. Betteſworth*, at the *Red-Lyon* in *Pater-noſter-row, London.*

Q. *How is the Body nouriſhed?*

A. By Blood; which Blood is thus made; the Food after being chewed in the Mouth, and mixed with the *Saliva* or Spittle, paſſes through the *Oeſophagus* or Gullet, into the Stomach; the inner Coats of both which, being full of ſmall Glands, are continually ſupplying the Stomach with an *Acid*, which meeting with the pounded Food, makes a ſort of ferment, and makes it become more liquid, and perfectly *uniform*; which being equally on all ſides ſqueezed by the Stomach, paſſes through the *Pilorus* into the Inteſtines; where (in the *Jejunum* and *Duodenum*) it mixes with the *Bile* and *Pancreatick Juice*, by means of the *Ductus Cholodocus* and *Ductus Pancreaticus*, which open into them for the ſame Purpoſe; *theſe* here meeting

with

with the *Aliment*, perfect the Liquifaction, and then it makes its way thro' the other Inteſtines, where the groſſer Part is evacuated by Stool, and the moſt refined Part called *Chile*, enters the Orifices of the firſt *Venæ Lacteæ*, which are more numerous in the *Jejunum*, than in any other Inteſtine, and ſpread themſelves all over the *Meſentery*, in whoſe *Baſis* there are Glands, in which theſe Veins terminate; and the *Chile* is received by the ſecond ſort of the *Venæ Lacteæ*, and conveyed to the *Receptaculum Chili*, from whence it riſes through the *Ductus Thoracicus* to the left *Subclavian Vein*, and ſo glides on to the deſcending Branch of the *Vena Cava*; after that to the right *Auricle*, and then to the right *Ventricle* of the Heart; then by its *Syſtole* or Contraction, it is forced thence into the Lungs, and then deſcends into the left *Auricle* of the Heart; whence it is expelled into the *Aorta*, or great Artery, and ſo paſſes along with the Blood, by the Arteries, through the whole Body, and returns again with it by the Veins to the Heart, and undergoes many Circulations before it is turned into Blood; but by the *vital Spirits* and other *active Principles* of the Blood, it receives *ſome Alteration* every time it circulates; till at length all its Maſs (that is capable of being turned into Blood) is *ſanguified*; and what is *not*, is diſcharged by Urine, Stool, Sweat, *&c.* The Blood being thus made, the Body is nouriſhed by it; for there is that diverſity of figure, both in the Particles of the Blood, and Pores of each part, that in the Circulation every Particle ſticks in its proper *Pore*, in order to paſs into the Nouriſhment of *that part*, which is of the ſame Nature with its ſelf; (*viz.*) the Salt and *ſulphureous* Particles equally mixt, go to nouriſh the Fleſhy or Muſcu-

Muſculous Parts; the Oily and *Sulphureous* to the Fat; the Salt and *Tartareous* to the Bones, *&c.*

Q. *How much Blood is ſuppoſed to be in the whole Body?*

A. According to ſome Authors, 15 or 20; and to others, about 24 Pounds; which circulates 6 or 7 times in an Hour.

Q. *Why is the* Arterial *Blood more florid than the* Venal?

A. That Colour is meerly owing to the mixture of the Particles of the Air with the Blood in the Lungs; and even the Venal Blood a while expoſed to the Air, acquires (contrary to its Nature) a florid Colour alſo, moſt commonly.

Q. *What is* Saliva *or Spittle?*

A. It is made of the Blood which paſſes thro' the *Parodital Glands*, placed behind the Ears, and the *Maxillary Glands*, ſeated under the lower *Maxilla*, between the *Larinx* and the *Os Hyoides*, and is preſſed out thence into the *Ductus Salivares*, which open into the Mouth, under the Tip of the Tongue, upon the two ſides of the *Frænum*, by the lower Fore-Teeth. Theſe *Ductus*'s are 4 in number.

Q. *How much* Choler *is ſuppoſed to be in the Body?*

A. About two Pounds; but it is very uncertain.

Q. *How does it cauſe the Jaundice?*

A. Either when through the want of a *convenient Ferment*, it is not ſeparated from the Blood: or when the Neck of the *Veſica fellis* is ſtopped, that none can paſs out of it into the Inteſtines. But, the Reader may find greater Satisfaction in my *Mechanical Eſſays on the Animal Oeconomy.*

Q. *What*

Q. *What is Hunger and Thirſt?*

A. Hunger is cauſed by an *Acid* which continually trickles down the Cavity of the Stomach from its own Glands, and thoſe of the *Oeſophagus*, which when the Stomach is empty, it finds nothing to prey upon, therefore pricks upon the Membranes of the Stomach, and ſo cauſes a deſire of Food; and when there riſes up ſome Vapour, which heats its ſuperior Orifice, it inclines us to cool it with ſomething; and this is what is called *Thirſt*.

Q. *How is Milk produced?*

A. Milk conſiſts of a middle Nature between Blood and *Chile*; being not ſo thick as the one, nor ſo *ſerous* as the other, and is thus made; When the *Chile* has mixed with the Blood (as has been ſaid), and is got as far as the *Aorta*, that part of it which is moſt *ſerous*, is conveyed by the *emulgent Artery*, and ſtrained into the Kidneys, by the papillary Bodies, to be ſent from thence, by the *Ureters* to the Bladder, and ſo voided by Urine, whilſt that part that is moſt *Milky*, is carried by the ſmall Branches of the *Mammariæ*, to all the Glands of the Breaſt, into which the Secretion of it is made; where all its Particles being united, make up a *Body of Milk*, which is thrown by the Pipes of theſe Glands into the *common Ciſtern*, where it remains till the Child (by the *Tabuli* which run from the Ciſtern to the Nipple) draws it out. Vide *Mechanical Eſſays*, &c.

Q. *What is Smelling, and how is it performed?*

A. It is a *paſſive Quality* of the *Olfactory Nerves*, in receiving the Impreſſion that *Odorous Bodies* make, by Virtue of their Exhalations; thus, (*viz.*) the little Atoms that exhale from *Odoriferous Bodies*, being carried by the Air to the Noſe, ſtrike

ſtrike upon its inner Membrane, and ſhake the ſmall Pipes of the *Olfactory Nerves*; upon which the ſubtle Matter with which they are filled, partaking of the ſame Motion, flies immediately to the *Corpora Striata*, where theſe Nerves take their riſe, and where the Soul perceives that this is an Impreſſion of an Odoriferous Body. And this is what is called *Smelling*.

Q. *What is the Difference between* Conglobate *and* Conglomerate Glands?

A. Conglobate Glands are they which are undivided, being of one Subſtance and Compoſition, appear firm, and have an even ſmooth Surface. *Conglomerate Glands* are compoſed of ſeveral little Bodies, joyned under one Membrane, ſuch as the *Panchreas*, *Salival Glands*, *Lachrimal Glands*, &c.

Q. *What is the* Os Hyoides?

A. It is ſeated at the Root of the Tongue, under the lower Jaw, and above the Larinx, and is ſhaped like the Greek Letter υ, whence it is called *Ypſiloides*; by its Gibbous ſide it is joyned to the Baſis of the Tongue, and into its *Concave*, it receives the *Epiglottis*.

Q. *What is its Uſe?*

A. It ſerves for the inſertion of thoſe Muſcles that move the Tongue, and for keeping the Throat open till we ſwallow, and to keep open the Wind-pipe till we breathe and ſpeak.

Q. *What is the* Os Pubis?

A. This is what is called the *Share-bone*, and is the third of the *Oſſa innominata*, of which it is the lower, and inner, or forepart.

Q. *What are the* Oſſa innominata?

A. The

A. The *Os Ilium*, *Coxendix*, and *Pubis*, joyned to the *Os Sacrum* (through the intervention of a Cartilage) by a ſtrong Ligament, which together frame the *Pelvis*, or Cavity, which contains the Bladder, Matrix, and part of the Inteſtines.

Q. *What is Hearing?*

A. It is a Sence, whereby Sound is perceived from a trembling Motion of the external Air, beating upon the *Timpanum*, and ſo moving the internal Air with the Fibres of the Auditory Nerve, and communicated to the Brain.

Q. *What is the Tympanum?*

A. It is what is called the Drum of the Ear; and is a nervous, round, *pellucid* Membrane, of moſt exquiſite Sence, ſeparating the outward from the inward Ear; and ſprings (according to *ſome*) from the *Pericranium*; to *others*, from the *Pia Mater*; to *others*, from the *Dura Mater*; and to *others*, from the ſofter Proceſs of the auditory Nerve expanded; when it is taken away, a Cavity appears on the inſide of it; in which are contained four little Bones that are moveable, and very much conduce to Hearing; (*viz.*) (1.) *Malleolus*, or the little Hammer. (2.) *Incus*, the Anvil. (3.) *Stapes*, the Stirrup. And, (4.) *Os Orbiculare*, ſo called from its round Shape. If by any Accident, the *Tympanum* is lacerated, the Hearing of that Ear is irrecoverably loſt; therefore let the young Surgeon be cautious *how*, or with *what*, he ſpringes an Ear; and be ſure to uſe an Ear-ſpringe, and not one with a long Pipe, nor do it too *forcibly*, leſt he come off with juſt Shame and Scandal, and do ſuch Miſchief as he can never make Satisfaction for. As to what he ought to ſpringe an Ear with, in Deafneſs, *&c.*

warm

warm Water, in which is a Quantity of Canary, *aq; Hungar.* or good Brandy, may ſerve as well as any thing.

Q. *What is Viſion or Sight?*

A. It is that Sence whereby from the different Motion of different Rays, gathered in the *Chryſtaline* and *Vitreous* Humour, and ſtriking upon the *Tunica Retina*, viſible Objects are perceived.

Q. *How many Humors is the Eye compoſed of?*

A. Three, (*viz.*) Aqueous, Chryſtalinus, and Vitreus.

Q. *How are they ſituated?*

A. The Aqueous is outermoſt, and fills up that Space which is between the *Cornea* and Chryſtaline Humor before: If any thick Particles ſwim in it, then Flies, *&c.* ſeem to be flying before the Eyes; and if they yet grow thicker, ſo as to cauſe a Film, and this be ſpread before the hole of the *Pupilla*, it makes that Diſeaſe called a Cataract. The Chryſtaline Humor is placed between the *Aqueous* and *Vitreous*, not exactly in the middle of the Eye, but inclining rather *towards* its forepart; it is more bright and ſolid than either of the other two. The Vitreous, ſo called from its likeneſs to melted Glaſs, is thicker than the Aqueous, and thinner than the Chryſtaline, and exceeds both in Quantity.

Q. *How doth Blood paſs out of the Arteries into the Veins?*

A. Either by *Anaſtomoſis*, or *Inoſculation*, (which is now, with Reaſon, not believed;) or elſe by the Capillary Arteries letting out their Blood into the Pores of the Subſtance of the Parts, on whoſe Nouriſhment part is ſpent, and the reſt imbibed by the Mouths of the Capillary Veins;

Veins; and this is now the common received Opinion.

Q. *Which is the* Vena Saphæna?

A. When the Iliacal Branches of the *Cava* are descended as far as the Thigh, they are called *Cruralis*; and when past the Groins, are divided into six more, the first of which is the *Saphæna*, and which descends down the inside the Thigh and Leg, between the Skin and *Membrana Carnosa*, and generally appears turgid, on the inside the Ankle, where it is opened with Safety and Success, in Diseases of the Matrix.

Q. *What is an Hair?*

A. It is a small Body, Thread-like, hard and flexible.

Q. *Of what Figure are they?*

A. Generally four-square, sometimes triangular, seldom round, but always porous lengthways.

Q. *What are Nails on the Fingers and Toes?*

A. They are a horney transparent Substance, coming neareſt to Bones, and are given for Defence, but are without Sence; and both they, and the Hair, will grow after a Man is dead.

Q. *Of what Weight and Bigneſs is the Brain of a Man?*

A. Some Men's, weigh four or five Pounds, and are by *some* affirm'd to be as big again as that of an Ox.

Q. *And what is your Deſign in Publiſhing this Book the third time?*

A. The very same as it was the first and second Edition; (which have given such Satisfaction to the World, that they are all sold off;) and that was, To serve my Generation; and to deliver

deliver that in a few Words, and pleasant Method, that others have made mysterious Volumes of to torture the Young Reader's Pocket and Memory to little Purpose.

——*Si quid novisti rectius istis*
Candidus imperti, si non his utere mecum. Horat.

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ADVER-

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THIS *third Impression* being all printed off before the Author knew any thing of it, he is no way chargeable with the *Errata's*, which, to his great Concern, he finds the Book has a large Share of; particularly in p. 24. where the Reader is intreated to amend with his Pen, the following Blunders of the Press: *Viz.* l. 3. for *Dauri* r. *Dauci*, and for *càrni* r. *carui*. l 4. for *brilliant* r. *bulliant*, and for *dimier* r. *dimid*. l. 5. for *Colæture* r. *colaturæ*. l. 6. for *folus* r. *fotus*. l. 8. dele *use*. l. 9. for *Sal Macine* r. *Salis Marini*. l. 10. for *færrin* r. *farinæ*. l. 11. for *ratæ* r. *rutæ*. l. 14. for *Celluminis* r. *aluminis*. l. 15. dele *ol. oleam olium* ℥j. l. 16. for *Saponis* r. *Sapone*. or any other that the Reader may find, there being no Opportunity nor Time for the Author now to correct them.

Adver-

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